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Ecology and Culture of the Pastoral Tuareg

WITH PARTICULAR REFERENCE TO THE
TUAREG OF AHAGGAR AND AYR

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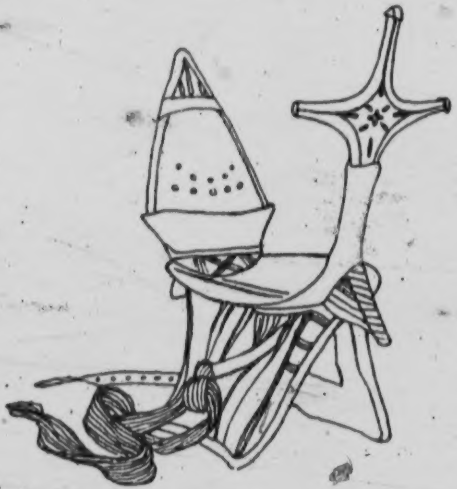
Ecology and Culture of the Pastoral Tuareg

WITH PARTICULAR REFERENCE TO THE
TUAREG OF AHAGGAR AND AYR

by

JOHANNES NICOLAISEN



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To the memory of my father,
Hans Marius Nicolaisen
and to my mother,
Anne Katrine Nicolaisen

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Preface

In this book I aim at the combination of historical and functional methods of anthropology to analyse the development of Tuareg culture with particular reference to food-producing activities. I do not, therefore, present all my Tuareg material. 121

My general anthropological outlook is doubtless largely due to my training under influential scholars of historical and functional methods. I was introduced to historical methods at the University of Copenhagen by Dr. Kaj Birket-Smith, who taught with that caution and sense which must be the foundation of all anthropological science. His strict demand that anthropology must proceed on the basis of knowledge forms the most valuable part of my whole anthropological training, and for this I express to him my sincere gratitude. 114

I freely admit that I am much attached to the traditional methods of Danish anthropology. Among its scholars I am greatly indebted also to Professor C. G. Feilberg with whom I have a large field of interests in common. From the very day I began my studies in Copenhagen he offered me all possible help in discussing with me the major problems of cultural history in the Near and Middle East, and in Africa, and using much of his spare time to teach me Arabic. His detailed study on the black tent and its history forms an important cornerstone for my chapter on Tuareg tent development.

When I began my studies in Copenhagen Professor Feilberg acted as curator in the Danish National Museum where, like other students of these days, I was generously helped by the curator, Jens Yde – my closest friend. Though his main field of interest is the Indians of the Americas, he has also a surprisingly comprehensive knowledge of African cultures. I hold in very high esteem Mr. Jens Yde's scholarly realistic outlook which has been extremely stimulating to my own work. I express my gratitude also to Dr. Helge Larsen, leader of The Ethnographical Collection of The Danish National Museum, and to the curator Mr. Werner Jacobsen.

My interest in functional anthropology dates right back to my University years in Copenhagen. For though Danish anthropology is in the main historical, it was Dr. Birket-Smith's demand that students should read the important works of such functional or social anthropologists as Malinowski, Radcliffe-Brown, Firth, Evans-Pritchard, and others. But most knowledge I have of functional anthropology came to me under a two years' study, granted me by The British Council, at The University College London with Professor C. Daryll Forde as my principal teacher. I wish to acknowledge my sincere gratitude for his unusual kindness and valuable help during my stay in London, and for his readiness to consider any problem in the light of his very deep and versatile knowledge. In this book I acknowledge his clear view of the problems connected with the development of food-producing activities advanced in 1934 when many scholars were shooting in the dark.

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114 My gratitude to Dr. Phyllis Kaberry, who acted as my supervisor during my London studies, is not easily expressed in words. Nobody has taken so profound an interest in my studies as Dr. Kaberry, and if my descriptions of economics and political systems contain views of any value this is due largely to her extreme interest in my Tuareg material. Much of my later field-work among the Tuareg has also been carried out along lines suggested by Dr. Kaberry.

My stay in London was indeed a fruitful one as I was also able to attend lectures and seminars by Professor Raymond Firth and Professor I. Schapera, and to benefit from the rich knowledge of East African cultures possessed by Mr. G. W. B. Huntingford of The School of Oriental and African Studies.

121 [127] I try to reconstruct history within the limited area of Northern Africa occupied by the Tuareg. In doing so I use methodologies of different anthropological schools, and also include material available from written sources, from Tuareg traditions, and from archaeology. I feel confident that my procedure is justified, but present it to the reader's judgement with a quotation from the great anthropologist E. E. Evans-Pritchard, who speaks about the rejection of the reconstruction of history by functional anthropologists as follows: "A case can be made out for this rejection, though not in my opinion so strong a case as is usually supposed, for all history is of necessity a reconstruction, the degree of probability attending a particular reconstruction depending on the evidence available" (Evans-Pritchard 1962, p. 21).

114 122 The real foundation of my book is the field-material I have been able to gather during eight journeys to Northern Africa. I made the first two short trips on my own account, while later journeys were paid by Danish foundations, notably by *Statens Almindelige Videnskabsfond, Carlsbergfondet, Rask-Ørsted Fondet, Knud Rasmussen Fondet*, and by grants from the University of Copenhagen. I have also been supported economically by The Danish National Museum and by The Museum of Prehistory in Aarhus, which museums now contain my collections of ethnographical sepcimens. My first Tuareg journey carried out in 1951 owes its beginning to economic and moral support from the former leader of the Aarhus Museum, Professor P. V. Glob, now Director-General of the Central Office and of the Museum of National Antiquities in Denmark. My journey to the Tuareg of Ahaggar and Ayr 1954-55 was partly paid by The University College London on the very kind initiative of Professor Daryll Forde.

122 I express my sincere thanks to the above-mentioned institutions and their directors.

The results achieved on my journeys are due largely to friendly help rendered me by the Algerian administration and the administration of the Niger Republic in Niamey and at Agadez. In Algeria I met at an early date Mr. Pierre Bataillon and Mr. Josef Kniebihly of the Civil Administration at Djelfa. They willingly offered me their friendship and did everything to help me during the three weeks of 1947 when I suffered very greatly from malaria. On my journeys to the Ayr Tuareg I have been very kindly assisted by all governmental offices, and I thank heartily Mr. G. Feral, formerly civil governor of the Cercle d'Agadez, Mr. J. Demonceau, Mr. Claude Gardin, and Mr. and Mrs. Bernus of the IFAN at Niamey.

My two Danish friends, Niels Wismer, Norwegian Vice-Consul in Algeria, and Clas Wismer have been of outstanding importance for all my journeys among North African pastoralists. They supported me morally and practically every time I came to Algiers, and they gave me their friendship which I treasure most highly.

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I also acknowledge with grateful thanks the valuable help of the Danish Consulate of Algeria under the leadership of the Vice-Consul, Mr. E. Hartvig. 122

The valuable North African collections preserved in the Musée de l'homme, Paris, Musée d'Ethnographie et de Préhistoire du Bardo, Algiers, and in the Musée de la ville de Neuchâtel have been of extreme importance to my studies, and I wish to thank sincerely the directors of these museums for their kindness in allowing me free admission to all interesting objects. I thank the Musée de l'homme for its courtesy in permitting me to reproduce the illustrations Figs. 62, 75 & 88. For the photograph Fig. 254 I am indebted to the courtesy of Dr. Erik Smidt, Copenhagen. 127

Anthropology necessitates co-operation with many other sciences, and this I have often experienced when working on my book. I wish to thank sincerly my friend Mr. K.-G. Prasse for his readiness to let me benefit from his profound knowledge of all structural problems connected with Tuareg language and other Berber dialects. He has kindly undertaken the work of checking the spelling of Tuareg words used in this book, and I owe him much for discussions about the meanings of such Tuareg words that may be important from a culture-historical viewpoint. I also thank my friend Dr. Hans Helbaek of The Danish National Museum for his assistance on problems connected with cultivated plants, and the veterinary surgeon Mr. Niels Grunnet for his comments on Tuareg stock-diseases. 114

I wrote this book in English which was kindly corrected by Major C. L. Bayliss of The British Embassy in Denmark. As to the drawing of diagrams, maps, etc., they are made by Mr. Arne Morell Nielsen whose readiness to help a friend is unrivalled.

The book was written mainly during eight months of 1961 and nobody has rendered me so much real help as my wife Ida.

I cannot in this way convey my heart-felt thanks to Tuareg friends, but my thoughts are among them with my brothers of the Aġuh-en-tehlé and the Imezzureg tribes.

Copenhagen, June 1963

JOHANNES NICOLAISEN

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Boy of the noble class, *Kel Tahabanat* on the Niger.

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The Danish National Museum (N.M.),
The Museum of Prehistory in Aarhus (F.M.), and The Musée de l'Homme, Paris.

Introduction

This book is the result of several years' study of North African pastoralism. My interest in this subject 114 began under climatic conditions rather different from those of North Africa. In the winter 1945–46 121 I journied on skis through Northern Sweden, Finland, and the Norwegian Finmark. For about three months I lived among the Lapps, and, watching the techniques of reindeer-breeding, I became very interested in the problems connected with the history and evolution of stock-breeding. Shortly after my return from this trip I began to study anthropology in the University of Copenhagen under Dr. Kaj Birket-Smith, and as the main subject of the degree of M.Sc. acquired in summer 1950, I chose pastoral cultures of the Near and Middle East. I had already then made two short journeys to North Africa.

(1) In summer 1947 I spent about three months in Central Algeria to investigate Arab nomads in 114 the steppes of the High Plateau and the adjacent parts of the Sahara. I travelled around the towns of 122 Djelfa, Zenina, Aflu, Laghwat, and Ghardaya. I had little money at my disposal and could never afford to engage native assistants or to have a horse or a mule for riding and transportation. I walked through the barren steppes and deserts carrying as my main luggage several bottles filled with water. This journey was certainly not easy, and at its end I suffered very badly from malaria. Nevertheless, I managed to get into contact with camps of nomadic tribes such as the *Ulad Nail*, the *Larba*, and the *Sait Otba*, and for shorter periods I followed them during their migrations towards the south. I also contacted certain semi-nomadic tribes living around Aflu in Djebel Amour of the Sahara Atlas. I did not, however, understand Arabic, and the nomads, who were rather shy and suspicious of Europeans, generally had no knowledge of French. It is evidently most difficult to collect ethnographical material under such circumstances. And if I had not received the very kind assistance of French administrators and officers, of native Arab caids, and of Arabs who had formerly served in the French Army, I should indeed have acquired nothing. The year 1947 followed upon a long period of drought which had 731 caused severe losses to all nomads. Many of them had lost all their livestock, and famine occurred all over pastoral Algeria. The consequences of the drought when at its worst can be illustrated by the following example:— Arriving at Aflu in the Djebel Amour, I discovered a small camp the tents of which apparently belonged to a type constructionally different from those used among Central Algerian nomads. I went to the camp where I was told that it belonged to semi-nomads of the *Adjaletes* and *Ulad Sidi Brahim* tribes. They all suffered extremely from famine, and entering the first tent I found three dying children under filthy rugs. I now concentrated upon the problems connected with [121] this dreadful disaster which seemed to prove the insufficiency of pure pastoralism in the barren countries of North Africa.

114 (2) In winter 1950 I visited several *Kabyle* villages in the Djurdjura Mountains, and stayed for some
121 time in the regions which I had already visited in summer 1947. I wanted to gather supplementary
material on the consequences of the drought period, and also to acquire some personal knowledge
of winter life among nomads. – Part of the material collected 1947 and 1950 has been published
(Nicolaisen 1950).

101 On later journeys to Northern Africa I have studied culture and society of pastoral Tuareg:—

114 (3) In summer 1951 I spent about five months (May September) in Ahaggar. I arrived at Algiers
122 from where I travelled southwards by car to make short stops at Djelfa, Lughwat, Ghardaya, El
[124 Golea, and In Salah. Reaching Tamanṛaset in Ahaggar in the month of May, I hired an interpreter
to visit many Tuareg camps of the important vassal tribes *Aġuh-en-tehlé* and *Dag Ṛali* on journeys
accomplished by means of camels and donkeys. Part of the time I also lived at Tamanṛaset where I
was visited daily by Tuareg informants. Apart from Tamanṛaset I visited the following centres of
[121 cultivation:— Tit, Utul, Terhenanet, and I-n-dalaġ. My investigations concentrated upon economics
[126 and material culture in relation to environment, and about 300 ethnographic specimens were collected.
I left Tamanṛaset for Algiers by plane via Ġanet (Djanet), Ṛat (Ghat), Ft. Flatters, and Wargla.

(4) I returned to North Africa in summer 1952. The length of this visit was about three months and
a half. From Algiers I went by train and trucks to Arris in the Aurès Mountains where I stayed for
about five weeks among the semi-nomadic Berber-speaking *Chawiya.* I rode through the valleys of
this montain massif on a mule, and the journey terminated with my arrival at the oasis of Biskra.
From Biskra I went by train to Tuggurt from where I continued by truck to Wargla. I left this oasis
by a French military plane for Ġanet in Tasilé-n-Ajjer via El Golea, In Salah, and Tamanṛaset. At
Ġanet I hired camels and a native guide and went westwards via Ft. Ghardel to Afara, where I had
the opportunity to meet the supreme chief of the *Kel Ajjer* living in French territory. From Afara I
went up the valley named Aharhar and across the Tasilé Mountains to Éléẓi (Ft. Polignac). After a
short rest with the French garrison I went northwards to the region of Hassi Issendjel, where I visited
various Tuareg camps, notably of the tribes *Kel Terurit* and *Uraṛen.* I stayed in Tasilé-n-Ajjer for six
weeks, and returned by plane to Algiers via Ft. Flatters and Wargla. From Algiers I made a very
[126 short trip to the *Kabyle* of the Djurdjura Mountains. From the Kabyle, the Chawiya, and the Ajjer
Tuareg an ethnographical collection of about 70 specimens was made.

(5) From autumn 1952 until summer 1954 I studied social anthropology in University College
London under Professor Daryll Forde and Dr. Phyllis Kaberry. My studies in London were interrupted
in summer 1953 when I went to North Africa to stay for three months among the Ahaggar Tuareg.
I lived most of the time in camps of the vassal tribes *Dag Ṛali* and *Aġuh-en-tehlé*, but I also visited
the *Iklan-en-tawsit* and camps of certain *Iseḳḳemaren* tribes, notably the *Iheyawen-Hada.* I also paid
a visit to camps of the *Kel Ṛezzi* Tuareg (*Ahl Azzi*) who descend patrilineally from Arabs, and I spent
several days in the camp of the *Amenukal*, that is the supreme chief elected from the dominant noble
tribe of *Kel Ṛela.* Among agricultural settlements visited the most important were Abaleṣṣa and Silet –
[121 apart from Tamanṛaset. My studies concentrated upon social and political organization, but I made
[126 an ethnographical collection of more than a hundred specimens. The journey from Algiers to Tamanṛaset and return was made by plane via El Golea and In Salah.

(6) My sixth journey to North Africa was undertaken 1954–55 and comprised about 14 months' 101
field-work among Northern and Southern Tuareg. I left Algiers by car via Djelfa, Laghwat, Ghardaya, 114
El Golea to In Salah at the beginning of the autumn 1954. At In Salah I bought four camels and hired 122
an Arab guide of the *Ulad Ba Ḫammu* tribe. After a short visit to his camp we went southwards to the region of the Ahnet Massif where I visited camps of *Kel-ahem-mellen* (a small noble tribe), *Kel-Immidir* (*Iseḳḳemaren*), *Ayt Lowayen* of the *Kel Turha* section, *Kel Ṛezzi*, and notably the *Kel Ahnet*. Two small camps visited claimed to belong to the noble *Taytoḳ* tribe, but they had no matrilineal relationship to that tribe which is now found in the Tamesna plains west of Ayr. I left Ahnet for Tamanṛaset about the middle of December, and in the following months I travelled alone with my camels in Ahaggar as I now knew Tuareg language sufficiently to dispense with an interpreter. Until the beginning of April 1955 I lived in camps of the *Dag Ṛali* and the *Aġuh-en-tehlé* tribes, and passed some days in the *Amenukal*'s camp. I also had a house at Tamanṛaset where I could work more peace- 121
fully with problems connected with kinship, land tenure, and political organization. In this work I 115
was mainly assisted by two older Tuareg of the *Dag Ṛali* and the *Aġuh-en-tehlé* tribes. Apart from Tamanṛaset I visited the following cultivation centres:— Utul, Tahart, Ti-n-amenseṛ, Ennedid, Iġlen, Abalessa, Amsel, and Taṛhawhawt. – On the 3rd of April, 1955, I left Ahaggar for Ayr together with two Ayr Tuareg who were returning to their camps at Northern Ayr after a caravan journey to Tamanṛaset. We travelled south-eastwards via the small cultivation centre Taġnut and thence into the very barren country separating Ahaggar from Ayr. We refilled our six skin-bags with water at the wells of I-n-abeggi and I-n-aẓawa, and had no water again until we arrived at a fairly large and permanent waterhole (*aġelmam*) known as Tamengoyt, situated on the northern outskirts of the Ayr Massif. Close to this place we met the first Tuareg camps of the *Kel Tédalé* who dominate the northern parts of Ayr. The following days we saw several camps of these Tuareg. At last we arrived at the camp of one of my companions who belonged to the *Iḳḳoheren* tribe though his family was very mixed with *Kel Tédalé*. This camp was situated in the Azel valley, where we stayed for about ten days to regain full strength. Thereupon we continued to *Iferwan* which constitutes the northernmost village of the Ayr Massif. I lived in this village for about three weeks and then I continued towards Agadez together with a Tuareg of the *Kel Akerra* tribe. We visited camps of various tribes on our journey southwards (*Kel Ṛarus, Ifoṛas*). The journey was a difficult one as two of my camels were worn out. We left them in a camp of *Ikojjejiten* Tuareg. This was situated at the Afarak valley from where we continued to Agadez via the small agricultural settlements of Tabeydag, Azzal, and Alarses. From Agadez I went by truck down to Zinder, but returned quickly to make a more complete investigation of the Ayr Tuareg. The situation was now very difficult as my two camels left at Afarak died and I was too short of money to buy a new animal. My financial problems were rather acute and were solved only by the very kind and resolute help rendered me by Professor Daryll Forde of University College London. I was thus able to continue my studies for another six months. I hired a house in Agadez where I could work peacefully, and bought a fine riding camel in order to be able to visit Tuareg camps in the vicinity. The most extensive journey made went to the village of Awderas, north-east of Agadez and close to the Begzen Mountains. On this journey I revisited the small settlements of Tabeydag, Azzal, and Alarses, and visited pastoral camps of the *Ifoṛas*, the *Ikojjejiten*, the *Kel Tamat*, the *Igen-*

101 *déynen*, and the *Imezzureg*. If not staying in Agadez I lived mainly in camps of the latter tribe, and
114 spent a considerable time in one particular camp. My studies were concluded with a visit to the camp
122 of the *Kel Ferwan* drum-chief north of Aderbissinat. I remained in his camp for about a fortnight and also visited camps of the *Echchikhen* Tuareg and the Fulani who are numerous in this area. I left Agadez by air via Tawa, Niamey, Bamako to Dakar whence I returned to Denmark by ship, and a
[126] few days later returned to London to resume my studies at University College. On this comparatively long journey among the Tuareg I did not make any large ethnographical collection, as I could not afford to buy much, but brought back with me about fifty different specimens plus a few archaeological objects.

(7) In 1956 I returned to Copenhagen from London. I was then planning a new journey to North Africa, but for many reasons this had to be postponed until the autumn 1959. The journey was a very short one of only two months. I left Copenhagen by air on the second of August and arrived at Niamey the next day. After a week's stay at Niamey I continued by plane via Maradi and Zinder to Agadez. The day after my arrival at this ancient capital of the Ayr people I was able to join a car expedition organized by Mr. J. Demonceau, who was studying locust migrations, and by Mr. Claude Gardin of the "Peloton Nomade", who was looking for Tuareg camel thieves. We went first to Ingal and from there continued northwards to the village and salt pits of *Tegidda-n-tésemt*. We went further north but stopped at the well of I-n-abanɣerit, then going eastwards across the Talak Plains to the western edge of the Ayr Massif. Our journey back to Agadez followed the road through the mountains. Though this journey did not take much more than a week it was of great importance to my studies, as I had for the first time an occasion to see the extensive plains west of Ayr – a region of great economic value to many tribes not only of Ayr Tuareg but also to certain tribes of Ahaggar. On the journey I visited camps of *Idaléyen*, *Kel Tédalé* and *Ifoṛas* (Ayr Tuareg), of
[121] *Iregenaten* (Ahaggar Tuareg), and of *Tégehé-n-Efis* (originally Ahaggar Tuareg). In all these camps I collected much valuable material concerning tent structures and economics. – Shortly after my
[123] return to Agadez from this brief journey I met a Tuareg of the *Imezzureg* tribe. I knew him well from my visit to Ayr in 1955, and he was in fact my classificatory elder brother. I went immediately to his camp situated not very far from Agadez, and I lived with him and his kinsmen for the rest of the time left at my disposal. During this period the camp was frequently broken and taken to the best possible pastures of annual plants. I left the camp only once for a week when my brother and I made a camel journey westwards to Tegidda-n-tagayt and Tegidda-n-edrar. In these regions we visited several Ayr tribes which I had never been among previously (e.g. *Imezzuren*, *Ijakarkaren*), and we were lucky enough to meet during this journey the supreme chief of the noble *Kel Azel* tribe. We also visited the camp of the drum-chief of the *Kel Geres* Tuareg, who move northwards to Ayr at the end of the rains. I finished my field-work about the sixth of October and was back in Copenhagen
[126] by plane via Zinder, Maradi, and Niamey on the tenth. I made a very small ethnographical collection comprising about twenty specimens. My investigations were not concentrated on any particular
[127] subject. I acquired valuable supplementary material on such different matters as traditional political systems, kinship, ecology, and technology.

(8) Participating in The First International Congress of Africanists at Accra I had the opportunity

to visit Niamey for one week at the beginning of December 1962. Here I studied the very valuable 101
ethnographical collections of The IFAN Museum, and I spent two days in camps of *Béllo* and Tuareg 114
of the *Western Iwllemmeden* east and north-east of Ayoru on the Niger. Of particular value was my 122
visit to a camp of the dominant noble tribe, *Kel Tahabanat*. Its supreme chief *Amdey* and his family [127]
gave me important information on Tuareg culture in this little known area. My visit to Tuareg and [115]
Béllo near Ayoru was made possible by the very kind assistance of Mr. and Mrs. Bernus of the IFAN.
They put a truck with its driver at my free disposition.

Altogether I have spent almost three years among North African pastoralists – mainly among the 114
Tuareg. This length of time is not so impressive as it may seem, for my investigations have been carried
out over an extensive territory ranching from the Mediterranean to the outskirts of the Sudanese
savannah. A detailed study of Tuareg ecology and culture necessitates a detailed knowledge of change [121]
and variation in environment within and without the country in which the Tuareg live.

The literature which deals with the Tuareg is very comprehensive as can be seen from the bibliography at the end of this book, but most publications are of very little value and many of them are almost inaccessible.

The Tuareg are first mentioned in literature by Arab authors of the Middle Ages, but most of these historians and geographers did not know the Tuareg country and even the few of them who travelled in the Sahara tell us very little about the Tuareg in early Arabic texts generally called *Mulet-themin*, that is "the veiled ones". The most important Arab authors who mention the Tuareg are Ibn Hawkal (10th century), El-Bekri (11th century), Edrisi (12th century), Ibn Batutah (14th century), and Ibn Khaldun (14th century). Ibn Khaldun gives the most intimate description of the Tuareg though apparently he never met them. But they played a very important part in his attempt to recount the ancient history of the North African Berbers. After Ibn Khaldun came Leo Africanus (16th century) who published information gathered by himself on journeys in the Sahara. His book was first published in Italian. There are certain later Arab authors who have contributed to our knowledge of North African cultures and the Tuareg, e.g., Es-Sadi who lived in the 17th century. We must also mention in this connection that there are other valuable Arabic manuscripts, notably those generally referred to as the Agadez Chronicle, which contain much historical material on the Ayr Tuareg (cf. Palmer 1910; 1928; 1936; Urvoy 1934).

The first modern description of the Tuareg was given by Hornemann who travelled from Cairo to Murzuk in 1798. Throughout the 19th century many European travellers contributed to our knowledge of the Tuareg, and it is very important now to have their accounts which derive from a time when traditional political systems were unaffected by European colonization. Among these travellers we should mention such outstanding names as Lyon, Caillié, Denham & Clapperton & Oudney, Richardson, Barth, Duveyrier, Rohlfs, Hourst, Foureau, and von Bary. Lyon gives a very valuable description of the Tuareg who live around Tasilé-n-Ajjer, but by far the most important among these authorities are Barth, who wrote about the *Kel Ajjer*, the *Kel Ayr*, and the *Iwllemmeden*, and Duveyrier, who published an excellent monograph on the Northern Tuareg with particular reference to the Tuareg of Tasilé-n-Ajjer. At the beginning of the present century military posts were established in the Sahara, and literature about the Tuareg became more abundant. Thus Benhazera wrote a good book on

114 the Tuareg of Ahaggar who were also visited by other scientists and explorers. The most important work on these Tuareg is the great dictionary edited by Foucauld, who lived several years in Ahaggar until his death in 1916. Later works are those of Lhote and Blanguernon. From the Tuareg of Tasilé-n-Ajjer literature is scarce, but recently good studies on them have been published by Dubief, who has also contributed to our knowledge of the Ahaggar Tuareg. From Ayr we have one early book by Jean, who is often unreliable, while the later book by Rodd contains much valuable material. More recently our knowledge of the Ayr Tuareg has also been extended by the studies of Lhote and Nicolas. The latter author has published a good survey of the tribes and groups inhabiting Ayr and adjacent regions, but Nicolas' most important studies deal with the *Iwllemmeden Kel Dennek* around Tawa. Our knowledge of the south-western Tuareg along the Niger and around Timbuktu (the *Iwllemmeden Kel Ataram* and the *Kel Tademaket*) is unfortunately very sparse. There are only two books to be mentioned, namely those of Aymard and Richer. As to the Tuareg north of the Niger in the mountains of Adṛaṛ-n-Foṛas, they have been described by Cortier, and there is no other important work about them.

Very recently our knowledge of the Tuareg has also been increased by important works dealing more generally with the Tuareg or with particular aspects of their culture, e.g., the works of Lhote, Gabus, and Briggs. But none of these authors has tried to describe in detail Tuareg social organization. Nobody but Miner, who writes mainly on culture and social life of Timbuktu, has published a Tuareg kinship system. This system, which is taken down among the *Bélla* who are the former slaves of the Niger Tuareg, does not seem to be entirely correct in the sense that it does not indicate the true classificatory terms. I may add that I have myself published one Tuareg kinship system incorrectly, namely that of the Ayr Tuareg (cf. Nicolaisen 1959, p. 102). This will be correctly re-published in this book.

Tuareg literature is largely superficial, but there are a few good studies. In some of them you will find information also given in this study. When I mention observations which have also been made by earlier authorities, I do not refer to them in case they may be said to be generally known and made by several authors. Many of the works which I mention in my bibliography are of extremely little value. However, I wish to describe cultural features in detail, and a few interesting notes may be found even in more popular travelling books which are also sometimes furnished with good photographs.
[126] Almost all photographs published in this book are of my own taking or represent objects collected by myself among the Tuareg. Where other pictures are used reference to authorities is given.

The Tuareg

The Tuareg are Berber-speaking, nomadic stock-breeders who live in an extensive area of Western Sahara and the northern parts of the Western Sudan. The territory dominated by the Tuareg lies between 14° and 30° Northern Latitude and between 5° Western Longitude and 10° Eastern Longitude. 101 131

The Tuareg fall into several main groups which correspond largely to political units. These groups are the following:—

- I. *Kel Ajjer*, in the mountains named Tasilé-n-Ajjer in the eastern part of the Algerian Sahara and in adjacent parts of Libya. Northwards they reach Tripolitania and the great sandy desert Erg Oriental around Ṛadames.
- II. *Kel Ahaggar*, in the Ahaggar Mountains, in the mountains of Ahnet, Immidir, and Téfedest – and in adjacent parts of the lowland. Certain tribes of the Ahaggar group live in the southern plains of Tamesna between the mountain massifs of Adṛaṛ-n-Foṛas and Ayr, particularly around I-n-abanṛerit and Tegidda-n-tésemt.
- III. *Kel Adṛaṛ*, in the mountains of Adṛaṛ-n-Foṛas south-west of Ahaggar.
- IV. *Kel Ayr*, in the mountain massif of Ayr and in the plains to the west and south. The Tuareg of Ayr form several semi-independent units of which the more important are the *Kel Ewey*, the *Kel Tamat*, the *Kel Faday*, and the *Kel Ferwan*.
- V. *Kel Geres*, south of the Kel Ayr in the plains around Tessawa. Late in summer at the end of the rains they move up to Southern Ayr around the watering places of Tegidda-n-edrar, Tegidda-n-tagayt, and Tafadek.
- VI. *Iwllemmeden Kel Dennek*, that is the eastern *Iwllemmeden*, in the plains around Tawa. At the end of the rains they move northwards to the region of Ingal which is within the country of the Ayr Tuareg.
- VII. *Iwllemmeden Kel Ataram*, that is the western *Iwllemmeden*, in the plains around Meneka and along the Niger.
- VIII. *Kel Tademaket* comprising several tribes and groups of tribes around Timbuktu and Lac Faguibine. Important among these Tuareg are the *Tengerregif* and the *Kel Inteser*. The *Tademaket* Tuareg from about A.D. 1800 were subjected to the *Iwllemmeden Kel Ataram*.

The two former groups, the *Kel Ajjer* and the *Kel Ahaggar*, are frequently referred to by the generic term of *Northern Tuareg*, while the six latter groups living on the outskirts of the true desert and in the Sudanese savannah are known as *Southern Tuareg*. In addition to these groups there are certain small Tuareg groups which in recent times have left their original homeland. After the French penetra- 101 167

[p. 7]

167 tion into Ayr many Tuareg of that region emigrated, and some of them settled as far away as Darfur
[648] where they and their descendants still live near El Fasher. Another emigration took place after the
Tuareg revolt against the French in 1917. Many Tuareg of the *Kel Ayr* and the *Iwllemmeden* fled to
[162] Northern Nigeria to settle in villages and towns around Kano and Katsena. According to Rodd about
30.000 Ayr Tuareg fled to Nigéria after the revolt (Rodd 1926a, p. 361).

161 According to statistics for the period 1933–38 the total number of Tuareg living in the Algerian
Sahara and to the south in the republics of Niger and Soudan is estimated by Lhote to be about 240.000.
162 They were divided among the main groups as follows:—

Kel Ahaggar	4.254
Kel Ajjer	1.508
Kel Adraŗ	4.223
Kel Ayr & Kel Geres	27.765
Iwllemmeden	161.160
Tengerregif	40.000

162 These figures need certain corrections. Thus the *Kel Ajjer* are more numerous than indicated by the
161 above figure, which does not include Tuareg of that group living in Libya. On the other hand the
[567] figure for *Iwllemmeden* Tuareg is much too high; it includes about 94.000 negroid slaves which
should be deducted, as slaves are not included in the other figures. Nevertheless, Lhote believes that the actual number of free Tuareg is about 300.000 as the birth rate is on the increase. Thus statistics for 1950 indicate that there are 4.611 fairskinned Tuareg in Ahaggar (Lhote 1955a, p. 157). Nicolas assumes that there are about 500.000 Sudanese Tuareg (Nicolas 1950a, p. Avertissement). This figure is, no doubt, too high. If we assume that there are in all 300.000 Tuareg, we find that the two northern groups *Kel Ajjer & Kel Ahaggar* living in the true desert country constitute about three per cent of the total Tuareg population.*

197 The Tuareg language is known as *tamahaķ* in the two northern groups, *tamacheķ* in the south. It has four main branches or dialects, namely 1) *tahaggart* spoken by the *Kel Ahaggar* and the *Kel Ajjer*; 2) *tadraķ* spoken by the Tuareg of *Adraŗ-n-Foŗas*; 3) *tayrt* spoken by the Ayr Tuareg and the *Kel Geres*; 4) *tawllemmet* spoken by the *Iwllemmeden* and other Sudanese Tuareg. Grammatically these four dialects are closely related, but there are important distinctions in pronunciation and vocabulary. The dialects are on the whole mutually intelligible.

212 The alphabet known as *tifinaŗ* is known in all Tuareg groups. It is related to the ancient Libyan script. Several authors have stated that *tifinaŗ* is not so widely known among the modern Tuareg as it was in the past. It is true that certain Northern Tuareg have adopted the Arabic alphabet, but it is very difficult even nowadays to find adult Tuareg who do not know their proper script which is also widely used for letters. This, anyway, is true of the Tuareg groups I have visited, and it must be added that I have never found any proof of the statement so frequently seen in literature that the alphabet is

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* Considering the statistics for 1933–38 (240.000 ÷ 94.000) the total number of true Tuareg in 1950 would appear to be lower than 300.000.

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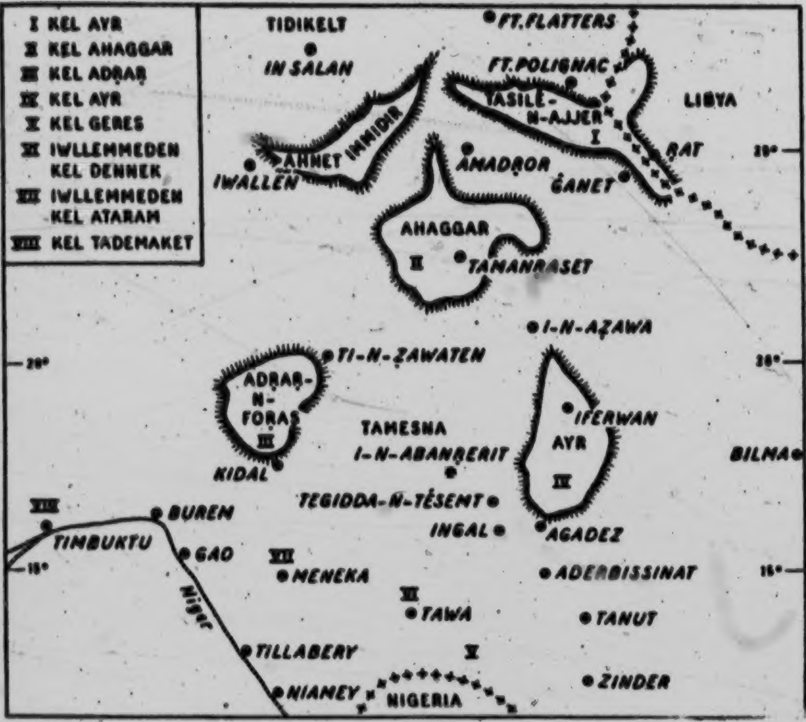
I KEL AYR
II KEL AHAGGAR
III KEL ADRAR
IV KEL AYR
V KEL GERES
VI IWLLEMMEDEN KEL DENNEK
VII IWLLEMMEDEN KEL ATARAM
VIII KEL TADEMAKET
TIDIKELT
IN SALAN
FT. FLATTERS
FT. POLIGNAC
TASILÉ-N-AJJER
LIBYA
IMMIDIR
AHNET
IWALLĒN
AHADROR
RAT
GANET
20°
AHAGGAR
TAMANRASET
I-N-AZAWA
TI-N-ZAWATEN
20°
ADRAR-N-FORAS
IFERWAN
TAMESNA
I-N-ABANGERIT
AYR
BILMA
KIDAL
TEGIDDA-N-TĒSEMT
BUREN
INGAL
AGADEZ
TIMBUKTU
GAO
15°
MENEKA
ADERBISSINAT
15°
Niger
TAWA
TANUT
TILLABERY
ZINDER
NIAMEY
NIGERIA

Fig. 1. Map of the central parts of the Western Sahara and the adjacent Sudanese zone inhabited by the Tuareg who fall into eight major political groups or federations. These groups, as mentioned in the text, are sub-divided into the politically very important drum-groups. The geographical position of the eight groups is roughly indicated by Roman numerals. The *Kel Tademaket* Tuareg (VIII) from about A.D. 1800 were subjected to the Iwllemmeden Kel Ataram (VII) (cf. Richer 1924, p. 96). Scale, 1 centimetre 125 kilometres.

known and used particularly by women. There are slight distinctions in the characters of the alphabet 212 used by various Tuareg groups. I here reproduce the characters generally used in Ahaggar (Tasilé-n-Ajjer) and in Ayr. In transcribing *tifinar* into the Roman alphabet I have on the whole adopted the [104] system used by Foucauld who has made the most profound studies of the northern dialect (Foucauld 1918-20, 1920, 1925-30, 1940, 1951-52), but certain alterations have been made in agreement with the proposal of K.-G. Prasse. The Ayr dialect is very badly known. Its grammar and its peculiar [114] vocabulary has never been studied.

565 The true Tuareg in most groups fall into several classes as follows:—

619 *Ihaggaren* (sing. *Ahaggar*), or *Imajeṛen* (sing. *Amajeṛ*). These two words designate the supreme Tuareg class which is generally referred to in literature as "nobility". The term *Ihaggaren* is used only among the Northern Tuareg, while *Imajeṛen* is employed in Ayr and also among Sudanese Tuareg. The two terms are synonymous, and so-called noble Tuareg are found in most Tuareg groups. However, the *Kel Geres* employ the term *Imajeṛen* for all true Tuareg. Among the *Kel Adṛaṛ* certain tribes claim to be noble, but though these tribes have very much the same position as noble tribes in Ahaggar and in Ayr, they are not recognized as true noble Tuareg by people of other groups.

Ineslemen (sing. *Aneslem*). This class is that of *Mrabetin* or marabuts, the religious class established after the introduction of Islam. In most Tuareg groups there are whole tribes of *Ineslemen* under the leadership of their own chiefs, but in Ahaggar there are only a few scattered families. The political position of the *Ineslemen* varies greatly from one group to another. Certain tribes in Ayr which are *Ineslemen* by origin have the same status as the true vassals to be mentioned below, while other *Ineslemen* tribes like the *Ifoṛas* of the *Kel Ajjer* have much the same status as noble Tuareg with the exception that they have no vassals. The *Ineslemen* perform religious duties connected with certain [793] rites of passage. Any Tuareg can acquire the position of *Aneslem* after training in reading the Ḳoran and education in the divine laws under the tutorship of another *Aneslem* or marabut.

Echchikhen (sing. *Echchikh*). This word also refers to people of religious status, and is used almost synonymously with *Ineslemen*. Certain tribes of Ayr (Damergu) have a kind of noble status and possess vassals. The word does not have the meaning of *Echcherifen* (sing. *Echcherif*), which refers to descendants of the Prophet. Individual Tuareg families - particularly in noble tribes - often claim relationship with the Prophet.

Iseḳḳemaren (sing. *Aseḳḳemar*). A class which is found only in the two northern groups - particularly among the *Kel Ahaggar*. The *Iseḳḳemaren* Tuareg descend from Arabs, or from unions between Arab men and Tuareg women. They are vassals who have a somewhat different status from that of true vassals, who are mentioned below.

Ireġenaten (sing. *Areġenat*). This name is not always applied to people of a particular class. It is used as a proper name for one Ahaggar tribe which has its origin from mixed marriages between (noble) Tuareg women and Arabs. In most groups the term *Ireġenaten* (*Iregenaten*) is applied to Tuareg descending from unions between noble Tuareg men and vassal women.

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Fig. 2. The Tuareg alphabet (*tifinaɣ*). The distinctions between Tuareg alphabets of Ahaggar and Ayr are less essential than appears from this list, for some differences are due to the fact that the Ahaggar Tuareg for certain letters prefer an edged form, the Ayr Tuareg a curved one. But both forms are known to all Tuareg. The Ahaggar Tuareg normally write from the right to the left like the Arabs, while the Ayr Tuareg consider it correct to write the letters in vertical rows from bottom to top. It can be seen from the list that the Ahaggar Tuareg have an alphabet of 25 consonants while the Ayr Tuareg have only 21. At the end of words the Tuareg sometimes indicate vowels with a dot, which may stand for any vowel. This simple vowel letter is known to the Ahaggar Tuareg as *taferit*, to the Ayr Tuareg as *tetenaḳit*. The dialect of the Ayr Tuareg is very little known and most Ayr words mentioned in this study have never been published previously. Even my collection of Ahaggar words seems to contain terms lacking in Foucauld's dictionaries. For certain geographical names the mode of spelling is in accordance with that generally used for geographical maps.

[text continues on p. 12]

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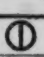
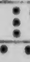
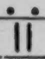
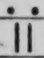
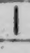
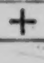
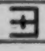
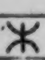
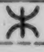
Ahaggar		Ayr		Transcription and value in Arabic letters	Notes
	yeb		eb	b ب	
	yech		ech	ch ش	
	yed		ed	d د	
	yeḍ			ḍ ض	Emphatic
	yef		ef	f ف	
	yeg		eg	g	Hard
	yeġ			ġ	A peculiar soft pronunciation something between g, d, j, and i
	yeh		eh	h ه	Aspirated
	yey		ey	y (i) ى	Used both as consonant and vowel at the end of a word. At the beginning and in the middle of a word only as consonant
	yej		ej	j	
	yek		ek	k ك	
	yeḳ		eḳ	ḳ ق	
	yekh		ekh	kh خ	Foucauld 1951-52 has the transcription ḫ
	yel		el	l ل	
	yem		em	m م	
	yen		en	n ن	
	yeñ			ñ	
	yew		ew	w (u) و	Consonant or vowel as for i mentioned above
	yer		er	r ر	
	yeṛ		eṛ	ṛ غ	Pronounced gutturally. Frequently transcribed as gh in litterature
	yes		es	s س	
	yet		et	t ت	
	yeṭ			ṭ ط	Emphatic
			et'	t'	Palatised t
	yez		ez	z ز	
	yeẓ			ẓ	Emphatic

565 619 *Imṛad* (sing. *Ameṛid*). People of this class are sometimes called "serfs" in literature, but the word "vassals" is also used. I prefer to use the latter term, but add that the word *Imṛad* is most difficult to translate into an European language. The vassal class is represented in all groups with the exception of the *Kel Geres*. Among the Northern Tuareg and also among the *Iwllemmeden* the word *Kel Ulli* (sing. *Agg Ulli*) is used synonymously with *Imṛad*. Among south-western Tuareg around Timbuktu the word *Dagu* or *Duṛu* is also used to designate vassals. The *Imṛad* class is by far the most numerous in most groups. The relationship between these vassals (*Imṛad*) and the noble Tuareg (*Ihaggaren*, *Imajeṛen*) forms the basis of most political systems which are described later (p. 393 ff.).

101 565 Members of the above-mentioned classes are true Tuareg, though the word *Ineslemen* is also used for marabuts of other peoples and for marabuts of various black-skinned castes found among the Tuareg. Among the Northern Tuareg all people of the above-mentioned classes with the exception of certain *Ineslemen* or marabuts are called *Imuhaṛ* (sing. *Amahaṛ*). The Ayr Tuareg have no such common term to designate the people known to us as *Tuareg*, but occasionally they use generically the word *Imajeṛen* though strictly speaking this term should be reserved for Tuareg of the supreme noble class.

101 The word *Tuareg* (sing. *Targi*) is never used by the Tuareg themselves, but by Arabs. Duveyrier claims it to be derived from an Arabic word of the root *terek* meaning "to abandon". The meaning of the word accordingly should be "those abandoned (by God)", and should refer to the fact that many Tuareg do not follow Islamic rules very strictly (Duveyrier 1864, p. 317 f.). The same explanation has also been given to me by an Arab of the *Ulad Ba Ḥammu* tribe of Tidikelt. However, the origin of the word "*Tuareg*" is perhaps a different one: – It may be related to the word *Targa* (Ayr) or *Tarġa* (Ahaggar and Tasilé-n-Ajjer), which name is used by the Tuareg to designate the part of the Sahara generally known to us by the Arabic word *Fezzan*. This is very likely, as we know from Arab authors of the Middle Ages that the word *Targa* or *Tarġa* was then used as a name for a very important Tuareg group living in that area and adjacent regions (cf. Benhazera 1908, p. 83 f.; Foucauld 1951–52, II, p. 534; Rodd 1926a, p. 273 f.).

142 144 The Tuareg are fair-skinned people who in certain regions and particularly in the south have mixed with Negroes. The Northern Tuareg are predominantly fair-skinned, and many of them are as "white" as Europeans though perhaps a little yellowish or brownish. It is difficult to determine their exact skin colour because they are burned and tanned by the sun and the hot wind characteristic of desert [291] climate. In addition, the Tuareg wear clothes dyed with indigo which comes off on the body, and they [518] rarely wash. When I lived among them my own skin-colour and that of the Tuareg were practically identical. Among the Ayr Tuareg there are also many fair-skinned people, but the Ayr Tuareg are more mixed with Negroes than the Northern Tuareg, and most *Kel Ewey* are predominantly negroid. Very mixed also are the *Kel Geres* and the same seems to hold for other Tuareg groups of the south. A few blond individuals have been recorded from the *Kel Ajjer* living around the oases of Ṛat and Ṛadames, and they may be the offspring of unions between Tuareg women and caravan traders of [148] the north (cf. Lhote 1955a, p. 162 f.). The blond individuals met in Southern Ayr are the offspring of the fairly numerous marriages between Frenchmen and Tuareg women, but it is claimed that a few years ago a very blond girl was born to parents of families which had never contracted marriages

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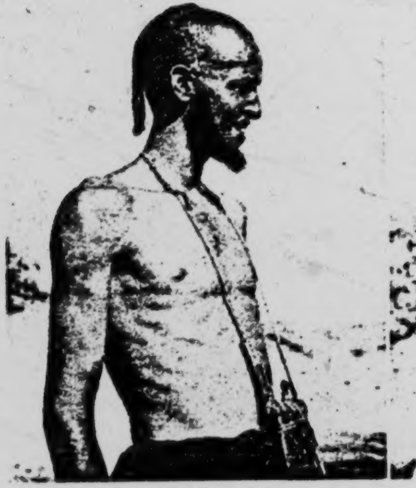

Fig. 3. Unveiled vassal Tuareg. Ahaggar, the *Iklan-en-tawsit* tribe.

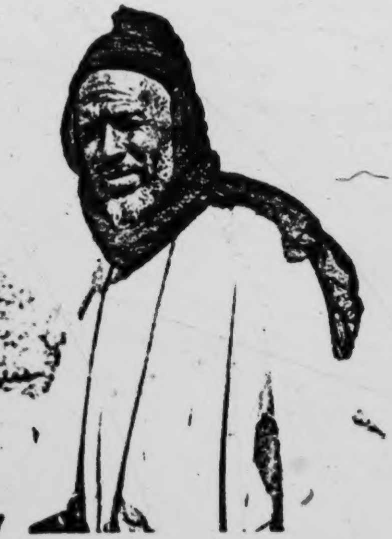

Fig. 4. Unveiled vassal Tuareg. Tasilé-n-Ajjer.

142 with the French. I have myself never seen a genuine blond Tuareg, but I have met a few albinos though
144 albinism seems to be rare. These observations agree with those of Lhote (1955a, p. 163). All the Tuareg
[143] I have seen had curly or straight black hair, and dark brown or almost black eyes. Many individuals
had fairly broad faces with protuding cheeks which gave them superficially a mongoloid appearance,
142 while others had features more like Mediterranean Europeans. In literature the Tuareg are generally
described as very tall people. I did not myself carry out anthropological measurements, but will not
hesitate to state that in my opinion a great many Tuareg are far from big. Very many adult men in the
groups I have visited were considerably shorter than myself (1.73 m). Tuareg men are generally dry
[147] and meagre, bearing the stamp of their roaming life in the desert. Their most outstanding quality is
[157] that of endurance and contempt of hunger and hardship. The appearance of Tuareg women is often
quite different – they tend to grow fat. This is probably to some extent due to the fact that married
826 women spend most of their life in the tents and get little physical exercise. But fatness is also a sign
832 of feminine beauty, and some women make a great effort to grow fat by drinking milk or eating
[261] certain fattening plants (cf. p. 177, 178). According to some Tuareg fat women symbolize wealth – large
flocks and herds, and much milk – but many Tuareg also say that they prefer fat women because they

826 get more sexual satisfaction from intercourse with them. "A fat woman is like a woman who has never
832 known a man", they say. Some women are steatopygous though never to the same extent as women
142 among the Bushmen and the Hottentot. Very comprehensive studies of Tuareg physical anthropology
114 are lacking. Readers are referred to the chapter written by Lhote who has also published a brief bibliography of studies on this subject (Lhote 1955a, p. 158–170, 433), and to the recent and valuable publication by Briggs (Briggs 1958, p. 163 ff., 183 ff.).

291 The custom of Tuareg face veiling has attracted the curiosity of many scholars and travellers. Much has been written about the fact that Tuareg men wear a veil (*tagulmust* in Ahaggar, *tagulmust* in Ayr) while their women are unveiled in contrast to Arab custom. There have been given various explanations of the origin of the custom of Tuareg face veiling. Most authors refer it to hygienic conditions: the veil protects the face from sand and dust, and it prevents mouth, nose, and throat from drying up in hot weather. The fact is that the veil has the latter function, and Arab bedouins of the Sahara will also frequently veil their faces during journeys in the hot season. But the hygienic explanation is definitely not the reason why the Tuareg also veil themselves in many situations where face veiling is unpractical and unpleasant. Another explanation of the custom of face veiling is that the veil may perhaps have certain religious or magic functions. This explanation is apparently also insufficient. A
[254] few Tuareg have claimed that the veil may yield protection from persons having an "evil eye" or an
"evil mouth" - beliefs known in Ahaggar as *tehot*, in Ayr as *tugarchet*. But as I have stated elsewhere
291 (Nicolaisen 1957a, p. 112; 1961, p. 114) the proper function of face veiling seems to be a social one.
576 [609] Many Tuareg will leave their face uncovered in family camps or on journeys, but they will always
[606] cover mouth, nose, and brow in the presence of foreigners (particularly foreign women) and in the
presence of their parents-in-law (particularly their mothers-in-law). Towards such persons it is also considered very indecent to show one's legs. It has been overlooked by most authors that Tuareg women wear a head-cloth (*ékerhey* in Ahaggar, *adalil* in Ayr), which is similar to the veil worn by men in form and shape. The headcloth and the veil are properly made from Sudanese indigo cotton, and both the veil and the headcloth are therefore also known as *alechchu*. It is true that Tuareg women
[609] do not veil their face by means of this headcloth in the same way as do the men. But in the presence
[606] of foreigners (particularly foreign men) and towards fathers-in-law the women will draw their headcloth over their mouth (cf. Fig. 297a). The man's veil and the woman's headcloth have identical social functions which is also proved by the fact that young men and women adopt veil or headcloth at initiation (Ahaggar), or at marriage (Ayr). Both the veil and the headcloth are worn by people of various black-skinned castes of Tuareg country but the custom of face veiling seems to be more strictly observed among the true Tuareg.

181 The custom of face veiling is one characteristic of all Tuareg. Another quality peculiar to all Tuareg, and particularly to those of the noble class, is their "snobbishness" as it is frequently called by many Frenchmen living at Tamanrasset and Agadez. There are a great many things a Tuareg cannot do, and there are many situations in which he will have to act in a very special way if he is to be regarded as a man worthy of respect and prestige. Tuareg attitudes to etiquette are not easily described in words. Gait, gestures, and postures are all intended to express qualities of elegance, arrogance, refinement, and strength. Vanity with regard to dress and ornaments is another characteristic of all true Tuareg.

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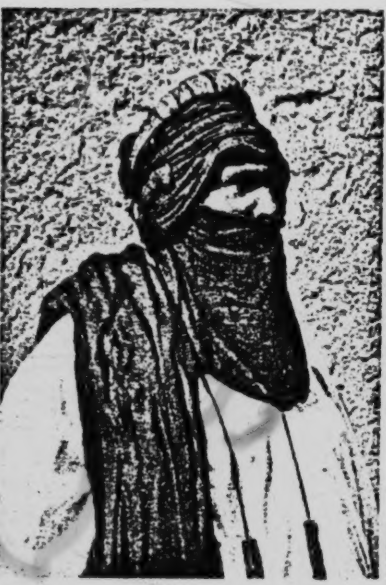

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Fig. 5. Veiled vassal Tuareg. Ayr, the *Imezzureg* tribe.

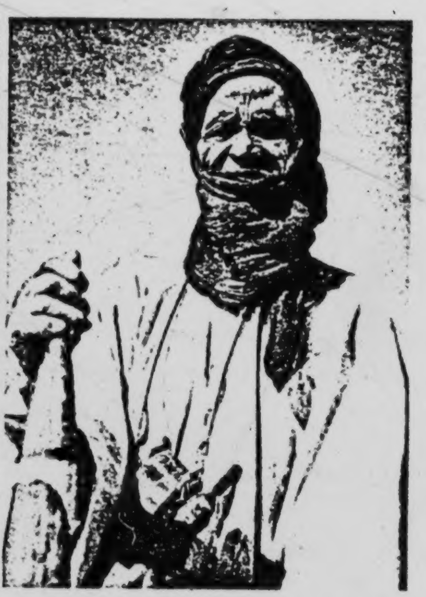

Fig. 6. Irrigation farmer of the *Ibuṛelliten*, that is descendants of mixed marriages between fair-skinned Tuareg and Negroes. The man is patrilineally releated to the noble *Taytoḳ* tribe, matrilineally to slaves. Ahaggar, Amsel.

181 and there are indeed many Tuareg both in Ahaggar and in Ayr who wear Islamic amulets which are believed to make the wearers look "great and important". "Prestige" is constantly in the mind of all Tuareg who are much more sophisticated than other people living within their country.

181 433 461 Most true Tuareg are nomadic stock-breeders who will not engage in the strenuous work of irrigation agriculture. The Tuareg will readily engage in any strenuous work connected with stock-breeding, caravan trading, and in the past also in raiding expeditions, which were organized by people of the nobility, but agricultural work is generally much despised. However, there are in all groups certain families or tribes the members of which subsist predominantly by agriculture, and are nevertheless considered true Tuareg by pastoralists. These agricultural Tuareg will be mentioned in a later chapter, 564 567 and we shall now pass on to a brief description of various negroid castes and of other non-Tuareg people living within the boundaries of Tuareg territory:—

Iklan (sing. ***Akli***). These are the proper slaves who are very negroid. Nicolas believes that the word *Akli* (pl. *Iklan*) is in fact derived from a k-l root meaning "to be black" (Nicolas 1950a, p. 189), but

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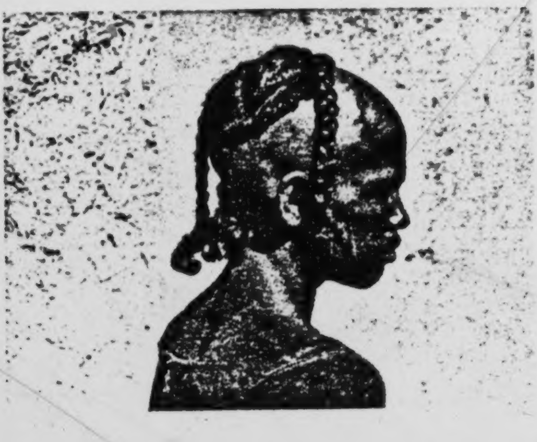

Fig. 7. Tuareg boy of the vassal tribe *Imezzureg* in Ayr.

564 567 Foucauld states that it does not refer to black skin-colour but only to membership of a particular caste (Foucauld 1951–52, II, p. 787). However, Tuareg slaves are Negroes taken during raids and warfare in the Sudan or bought from slave markets in Sudanese towns and cities. The Sudanese origin of slaves is also indicated by the Ahaggar word *Ibenheren* (sing. *Ébenher*), which term refers to a slave who speaks only a Sudanese language. It is frequently used by Northern Tuareg as an abuse of their [648] slaves, particularly of slave children. Among the Northern Tuareg slavery is still practised with the tacit consent of the French military administration. Most Tuareg of Ahaggar and Tasilé-n-Ajjer have slaves to take care of flocks and herds and to perform various domestic tasks. These slaves live in pastoral camps of the Tuareg, and in Ahaggar they have frequently told me that they felt superior to the black-skinned agriculturists though the latter largely descend from freed slaves. In the Southern [648] Tuareg groups slavery is officially abolished, perhaps because the Southern Tuareg are governed by civil administrators. But it seems as if the official abolition of slavery in the south was also a result of the Tuareg revolt against the French 1916–1917, and very few Ayr Tuareg have slaves nowadays. However, the manumission of slaves is not just a recent phenomenon due to European influence. Slaves have been freed long before the advent of French colonization at the beginning of our century. There are in the south whole groups of slaves who have been manumitted at an unknown date in the past, and these people are known among the Ayr Tuareg by the term *Iɣawélen* most of whom are nomadic stock-breeders culturally akin to true pastoral Tuareg. They are also known by the Hausa term *Buzu*, which term again corresponds to the Sonɣay word *Bélla*. This latter word, however, may sometimes refer also to people who are considered a kind of slaves by the Tuareg. Nicolas divides the freed slaves among the *Iwllemmeden* into three groups, viz. *Iklan-n-Egef*, *Irawelan*, and *Iderfan*. The two first groups comprise pastoralists also known as *Buzu*, or *Bélla*, while most members of the last

group are sedentary agriculturists (Nicolas 1950a, p. 190). In Ahaggar most freed slaves have become incorporated in the negroid caste now to be mentioned. 564 567

Izeggaŗen (sing. *Azeggaŗ*). This term designates the caste of agricultural Negroes known to the Arabs as *Ḥarratin* (sing. *Ḥartani*). In Ahaggar this caste has a rather mixed origin. It did not exist in this 564

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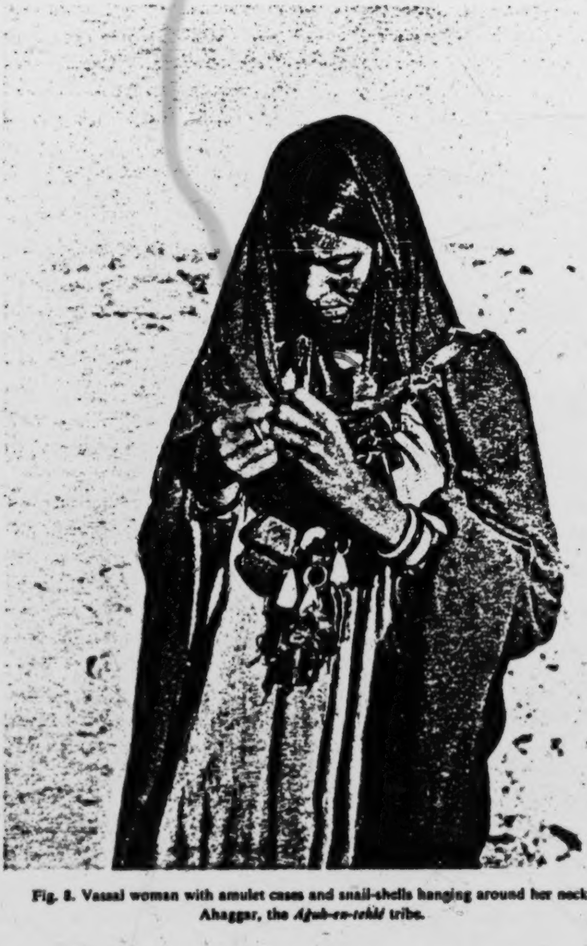

Fig. 8. Vassal woman with amulet cases and snail-shells hanging around her neck. Ahaggar, the *Afuh-en-tehle* tribe.

564 region until about a hundred years ago. During the reign of the Ahaggar *Amenukal Elkhaj Akhmed*
[463] (1830–1877) black-skinned agriculturists of the Tidikelt oases immigrated to Ahaggar to cultivate
[567] gardens on behalf of the pastoral Tuareg. The agriculturists of Tidikelt when settled in Ahaggar were
joined by many Tuareg slaves (*Iklan*) who are now free and known as *Izeggaṛen*, or *Ḥarratin*, like the
[191] immigrants. People of this particular caste, as a result of its mixed origin, are frequently bilingual,
speaking Arabic as well as Tuareg language (*tamahaḳ*). The *Izeggaṛen* (*Ḥarratin*) are generally less
[144] negroid than the slaves. They are racially very mixed and many of them have certain europid features.
[142] Their skin-colour is less frequently black than dark brown, and the name *Izeggaṛen* (sing. *Azeggaṛ*)
refers to that particular colour. An agricultural caste identical with that of *Izeggaṛen* does not seem to
exist in other Tuareg groups, but a negroid agricultural population of the Ṛat oasis known as *Ikewweren*
apparently has much the same status. A few families of the agriculturists living at Abalessa in Ahaggar
claim descent from *Ikewweren* immigrants.

[361] *Kel Ĝanet* (sing. *W' Ĝanet*). This word refers to the inhabitants of the Ĝanet (Djanet) oasis in Tasilé-
[144] n-Ajjer. The population of this oasis is a very mixed one. Negroid types are prevalent but fair-skinned
europid types are not uncommon. In Tasilé-n-Ajjer the *Kel Ĝanet* have much the same position as
[565] Tuareg vassals (Imṛad), while in Ahaggar, where there are *Kel Ĝanet* immigrants, their status is rather
[567] like that of other sedentary agriculturists mentioned above. In their homeland the *Kel Ĝanet* may
possess slaves like other Tuareg vassals, but those living in Ahaggar are never slave-owners.

564 *Ineden* (*Ineḍen* in Ahaggar) (sing. *Éned*). These are the blacksmiths who are found in all Tuareg
326 groups. They form a very important caste as Tuareg craft is little developed. The Tuareg obtain their
weapons and many other implements from the blacksmiths who also make silver ornaments for Tuareg
women. If it were not for the blacksmiths the Tuareg material culture would indeed be a poor one.
People of the other black-skinned castes are also highly dependent upon the blacksmiths who make
[162] hoes, sickles, and the like. In the two groups of Northern Tuareg there are very few blacksmiths – only
a few families who live in agricultural settlements. In Southern Tuareg groups blacksmiths are very
numerous, and many of them lead a pastoral life similar to that of the true Tuareg. The origin of the
564 blacksmith caste is unknown. Many blacksmiths claim their ancestor or patron saint to be *Sidna*
173 *Dawud*, that is "Our Lord David", who is said to have lived in an eastern country near Mekka. This
myth intimates Jewish descent and it is a fact that there are many Jews among smiths and goldsmiths
in Northern Africa and in the Middle East. This is well documented in literature (cf. Nicolaisen 1963).
A relationship between Tuareg blacksmiths and Jews is also in accordance with two traditions told
about the immigration of blacksmiths to Tuareg countries:— 1) According to a tradition collected
by Lhote, the blacksmiths descend from Jews who originally lived in the oasis of Temenṭit in Tawat.
At the end of the 15th century they were driven southwards by the Arabs (Lhote 1955a, p. 210 f.).
2) A tradition collected by Foucauld claims the blacksmiths to be Jews from Morocco. They followed
Berber-speaking tribes from that area on their southwards migration along the Atlantic coast (Foucauld 1951–52, III, p. 1300). These traditions are interesting and they do not disagree with the fact that
most blacksmiths among the Northern Tuareg comparatively recently have immigrated from Ayr and
564 Adṛaṛ-n-Foṛas. It is difficult to state the original racial position of the blacksmiths. Though most of
144 them are predominantly negroid there are also rather europid types among them, and Tuareg of Ayr

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[184] Fig. 9. Vassal woman with her child straddling over the right hip. The Tuareg generally carry their children in this way though certain Ayr Tuareg have adopted the Sudanese fashion of carrying children on the back. Ahaggar, the *Aguh-en-tehlé* tribe.

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have expressed as their opinion that the blacksmiths originally constituted a fair-skinned Tuareg population who mixed with black-skinned Sudanese people like so many true Tuareg. It is interesting
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that Tuareg blacksmiths have a peculiar language of their own known as *ténet*. This language has unfortunately never been studied. It is used by the blacksmiths mainly as a secret language spoken when they do not want other people to understand them, whereas blacksmiths use Tuareg (*tămacheḳ*) as their family language. The Ayr Tuareg consider the *ténet*-language an invention of the blacksmiths.

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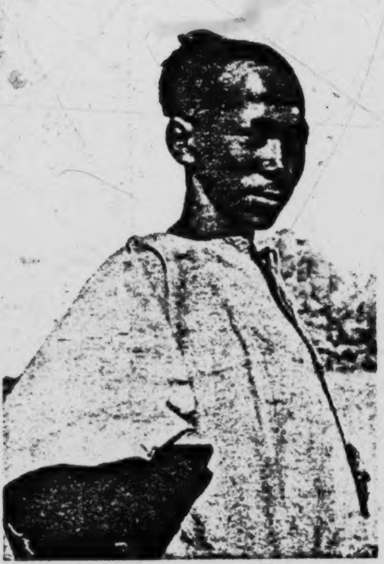

Fig. 10. Young man of the sedentary *Kel Ġanet* of Tasilé-n-Ajjer. He is yet too young to wear the veil which is used also by these Tuareg-speaking people of Ġanet.

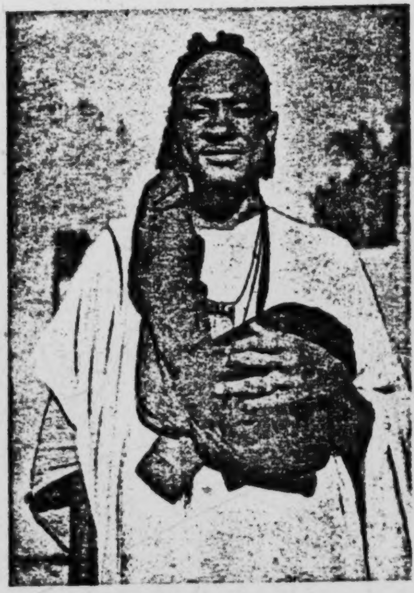

Fig. 11. Unveiled blacksmith. His racial features are predominantly negroid though his skin colour is yellow-brown rather than black. Ahaggar, Abalessa.

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From Ayr Tuareg who had much contact with blacksmiths I collected the following words of *ténet* language:—

ténet	*tamacheḳ*	*English*
wochimbagen	*ineden*	blacksmiths
wosilkum	*echink*	porridge
tikulkumin (pl.)	*tikammarin*	cheese
ohundegan	*aman*	water
ogera	*ėṛef*	head
tokonderey	*timezzugin*	ears
tedroragen	*titawin*	eyes

Prasse is of the opinion that the secret language of the blacksmiths is a kind of slang consisting of circumlocutions of everyday words, but derived from nothing but the local dialect itself. He suggests the following tentative interpretations of some of the words I have noted:— *wa chenbeyen* = "the blackheaded one"; *wa s ilkem* = "the one it follows" or: "sticks to"; *agera* = "leather bag".

The Ayr Tuareg say that the blacksmiths do not have *ténet* words for everything, but always use 564
Tuareg words for certain objects and animals. It is in fact possible that the *ténet* language has been 198
created by the blacksmiths to be used as a secret language. This explanation agrees excellently with
the social position of blacksmiths. They make weapons, ornaments, household implements, and the 564
like for the Tuareg. The Tuareg therefore consider them indispensable, and admire them for their
skill. But this is only one aspect of the Tuareg attitude towards blacksmiths who are also looked down [578]
upon because of their obscure origin and their predominantly negroid appearance. Furthermore,
blacksmiths are frequently wearisome to the Tuareg. They claim gifts from the Tuareg on every [431]
possible occasion, and if they are given nothing when they ask it is believed that they can do severe
harm to the persons from whom a gift is claimed. For the blacksmiths possess a mystic power known 564
to the Ayr Tuareg as *ettama* or *tezma*. This mystic power has nothing to do with black magic. It comes 754
into action automatically without any physical performance by the blacksmith if his demand is ignored.
The *ettama* power is dangerous to children and to animals but not so much to adults. Children
frequently fall ill with a swollen belly, while the effect on domestic animals is more severe and often
causes their death. Though blacksmiths do not perform any physical act to put their mystic power
into operation, they are nevertheless held responsible for damage ascribed to it by the Tuareg. This
can be illustrated by the following example from Southern Ayr: – An Ayr Tuareg was on his way
from Damergu to Ayr with a caravan of camels loaded with millet. One evening at dusk, when he was
just about to lead his camels out for grazing at night, a blacksmith came to him to ask for a gift of
millet. The Tuareg said that the blacksmith had better wait until next morning as it was already
getting dark. The blacksmith went away, and shortly after his departure one of the Tuareg's camels
fell ill and died. The Tuareg was convinced that the death of his camel was due to the blacksmith's
ettama power, and therefore wanted revenge. He mounted a camel, pursued the blacksmith and killed
him with an axe. This event happened only a few years ago. It illustrates how firmly many Tuareg
believe in the evil *ettama* power of blacksmiths. In fact many Tuareg openly declare that they dislike 564
and fear all blacksmiths. They do not like to associate with them except on festive occasions when [578]
blacksmiths frequently act as singers and musicians. The Tuareg never intermarry with people of the
blacksmith caste, and even people of other negroid castes are reluctant to intermarry with blacksmiths.
In Ahaggar a marriage may be contracted between blacksmiths and *Ḥarratin*, and in Ayr there are
said to be a few marriages between blacksmiths and people of other negroid classes or castes. But on
the whole the caste of blacksmiths (*Ineden*) can be characterized as endogamous. This is quite natural [754]
in view of the fact that blacksmiths possess the evil mystic power (*ettama*, or *tezma*), which I have
described in more detail elsewhere (Nicolaisen 1961, pp. 134 f., 146).

Between fair-skinned, true Tuareg and other black-skinned castes but that of the blacksmiths, 563
marriages are contracted now and then, and it seems as if mixed marriages of this type are becoming 582
more and more numerous. In Ahaggar there are some marriages between Tuareg and women belonging
to the castes of slaves (*Iklah*) or sedentary agriculturists (*Ḥarratin*, or *Izeggaren*) and there are even
marriages between fair-skinned Tuareg women and negroid men though such marriages are less
frequent. Mixed marriages are even more frequent in Ayr. The offspring of such unions are known in 563
Ahaggar and Tasilé-n-[illegible]jjer as *Ibuṛelliten* (*Abuṛelli*). This word is also known to the Ayr Tuareg, but

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Fig. 12. Blacksmith woman. Ahaggar, Abalessa.

563 they more frequently refer to mulattoes as *Ichardanen* (sing. *Acharda*). Such mulattoes do not form
any particular class or caste.

It is stated in almost all writings on the Tuareg that the offspring of mixed marriages will acquire
the social status of their mothers, but though this may be theoretically true in some Tuareg groups
actual conditions are more complicated. Among *Ineslemen* Tuareg and generally in southern Tuareg
[564] groups there is a strong tendency to acknowledge patrilineal affiliation. In Ahaggar classes and castes
[565] should ideally be matrilineal organizations. However, this is not always so. A man who descends
from a vassal mother and a noble father will not become a true vassal. He will not have to perform
any of the obligations characteristic of the vassal class, and to-day he is normally considered noble
563 though he cannot succed to chieftainship in his father's tribe. If a pastoral Tuareg marries a woman
591 of one of the black-skinned castes the children who grow up in the father's camp will frequently remain
there as pastoralists and members of their father's tribe. Conversely children descending from a black-skinned father of an agricultural settlement and a fair-skinned pastoral woman will often remain in
the settlement to practise agriculture even after their father's death. As to offspring of marriages
between Tuareg men and slave women, they will continue to live in the father's tribe as pastoralists,
and will frequently acquire the social position of the father as mentioned later in the description of
Tuareg slavery. Mixed marriages between fair-skinned Tuareg and people of black-skinned castes
constitute a minority. But it seems as if such marriages are on the increase.

101 All the above mentioned peolpe are Tuareg-speaking though part of the sedentary agriculturists of
563 Ahaggar (*Ḥarratin*, or *Izeggaṛen*) have Arabic as their mother tongue. In Ahaggar there are also many
[197] true Arabs – particularly at the administration centre of Tamanṛaset. There are also Arabs at certain
other villages in Ahaggar, and there are Arab pastoralists. They have largely mixed with the Tuareg,
and certain Arab pastoralists such as the *Ahl Azzi* (*Kel Ṛezzi*) should be classed rather with Tuareg
than with Arabs. There are also some Arabs in Ayr. There are Arab traders at Agadez, Iferwan, and
Ingal, and there are a few Arab pastoralists who have mixed with pastoral Tuareg of Northern Ayr.

But pastoralists of Arab descent are limited to a few scattered individuals or families in the Ayr area 101
in contrast to the extended Sudanese country around the Niger, where whole pastoral tribes claim 563
patrilineal descent from Arabs, while matrilineally most of them are Tuareg.

There are many other people within the extended country inhabited by the Tuareg. Very important [197]
in the south is a numerous population of Hausa-speaking Negroes. The so-called *Imeggedezen* (sing. *Ameggedez*) of Agadez speak Hausa which language is spoken by various other sedentary people of that region and further south. There are also a few Sonṛay-speaking people at Agadez, and Ingal further west is predominantly inhabited by Sonṛay-speakers known to the Ayr Tuareg as *Isaweṛen*. The Sonṛay, as is well known, are now found almost exclusively along the Niger, but Ayr was once conquered by the Sonṛay, and Barth describes Agadez as a Sonṛay-speaking city.

In the south the pastoral Fulani are now invading the grazing grounds formerly reserved to and owned by the Tuareg. Camps of pastoral Fulani are frequently seen nowadays even as far north as the southern outskirts of the Ayr Massif around Agadez and Ingal. When grazing is good the Fulani may even move further north into the Talaḳ plains with their herds of long-horned cattle. Many other people are frequently met in Tuareg country, e.g. the Tebu, and the Kanuri, who frequently come to Agadez. In Ahaggar and in Tasilé-n-Ajjer there are even a few individuals who descend from Tebu women.

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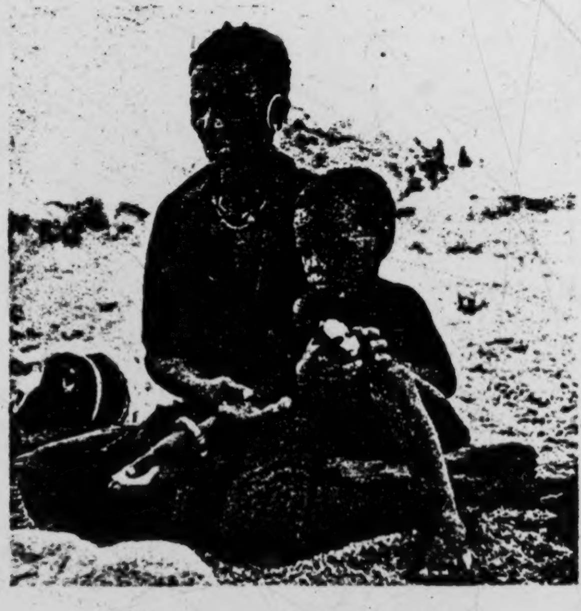

Fig. 13. Mother and son. Slaves of the Tuareg in Ayr.

177 The Tuareg have contact with a great many people speaking other tongues, and most Tuareg men
[191] know one or two languages in addition to their mother tongue. A great many Northern Tuareg speak
Arabic, and some of them even Hausa, as these two languages are important to them during caravan
[192] trading. In Ahaggar and in Tasilé-n-Ajjer the Tuareg language has adopted many Arabic words. This
is not the case to the same extent in Ayr, where most loan-words are taken over from Hausa which
language is spoken by most Tuareg men. Even the *Kel Ewey* dialect is extremely mixed with
177 Hausa. It should be mentioned that Tuareg women have very little knowledge of foreign languages.
184 They generally speak neither Arabic nor Hausa.

The women have played a great part in the preservation of the Tuareg language and culture. But the latter has nevertheless been much influenced by contact with culturally different peoples. Foreign influences are responsible for certain distinctions in the Tuareg cultures of the north and the south.

Environment

Tuareg country ranges from comparatively fertile savannah in the south to barren desert in the north, 133 where the nomads live in or near mountainous regions. Four Tuareg groups are named after the [101] dominant mountains of the Western Sahara, namely those of Ahaggar, Tasilé-n-Ajjer, Adṛaṛ-n-Foṛas, and Ayr.

The mountains of Ahaggar are by far the highest. They consist predominantly of archaic and proterozoic rocks, and of basalt and tufa from a relatively recent period. They are generally of a very dark colour and characterized by formations of rugged ranges, craters and isolated peaks which also bear evidence to former volcanic activity. But the rugged contours of the Ahaggar Mountains are also created by a complicated network of river valleys eroded mainly during the pluvial periods contemporary with the European Ice Age.

The Ahaggar Mountains fall into three main massifs of which that named Atakor is the most important and the highest, with peaks up to 3000 metres above sea level (Ilaman, Tahat). To the north is the massif of Téfedest with peaks which surpass an altitude of 2000 metres, and to the east the lower massif named Anahef. In geological structure these three mountain massifs of Ahaggar differ from the mountains of Ahnet, Immidir (Mouydir), and Tasilé-n-Ajjer which surround Ahaggar in the north. These latter massifs consist predominantly of paleozoic sandstone. They are not so high above sea level and form comparatively flat plateaux. The maximum altitude of Ahnet is 1300 metres while the peaks of Immidir rise to 1680 metres. The extensive plateau of Tasilé-n-Ajjer is on average 1200 metres above sea level, but a few peaks in the south exceed 2000 metres. Parts of the Tasilé-n-Ajjer mountains are covered with basalt rocks, and the river valleys of the comparatively level plateau often form true canyons which make traffic much more difficult than in the higher and more rugged mountains of Ahaggar. Between and around the northern mountain massifs the country consists mainly of flat plains covered with gravel and stone. Extensive areas of sandy desert are rare except [137] in parts of the *Kel Ajjer* territory.

Far to the south of Ahaggar are the low mountains of Tasilé-ta-n-Ahaggar, which are structurally related to the *tasilé* mountains in the north. This area is of little importance to the Tuareg and, in [31] contrast to the higher and more extensive massifs of Adṛaṛ-n-Foṛas and Ayr, is not regularly inhabited. While the mountains of Adṛaṛ-n-Foṛas are everywhere below 1000 metres, the peaks of Ayr rise to almost 2000 metres above sea level in the east and the north where the country is covered with basalt rocks. Idukalen in the Begzen Mountains is 1900 metres above sea level, while the Tamgak Mountains in the north have a maximum altitude of about 1800 metres. In its most mountainous parts the Ayr

[p. 25]

133 Massif resembles Ahaggar, but it is on the whole much more level with broader valleys and in between the lower mountains there are clayey plains. Immediately east of the Massif is the very extended sandy 131 desert which is uninhabited. Further south than Adṛaṛ-n-Foṛas and Ayr there are no considerable mountains. Between the two massifs are the plains of Tamesna and Talaḳ which continue into the plains of the Sudanese savannah.

Tuareg country consists predominantly of rocky mountains and flat, extensive plains of gravel and stone. This configuration is basic to our understanding of Tuareg economy as will become clear when we have outlined the characteristic features of climate.

132 Tuareg country is very hot in summer – so hot that even the nomads born and bred in the country suffer much from the heat at that season. The hottest months are May, June (farthest south) and July (farthest north). During these months temperature may exceed 50° centigrade, and is on average 30°–35°, or higher. In the uppermost mountain zone of Ahaggar nights are comparatively cool even in summer, while in the lower country there is often little difference between day and night temperatures. This is true in particular when, as often happens in summer, the sky is overcast during the night and consequently there is little radiation of the heat absorbed by rocks and sand in daytime. The day temperature in summer is normally higher than the temperature of the human body, and the 484 temperature of sand and rocks will rise to 60°–70°. Travelling is extremely hard under such conditions, and most people spend the day in the shade of rocks and trees, sleeping and drinking water of which 271 an adult person consumes 8–10 litres a day. Violent winds are common in the Sahara most of the year and in particular in the daytime; in summer these winds are usually very hot and add considerably to the discomfort of the climate, as do the numerous flies.

The country of the Northern Tuareg has a rather continental climate characterized by great fluctuations of temperature during the year. Although Tuareg suffer from heat in summer, they do not generally complain much about it, and they consider the comparatively cold winter much worse than the hot summer. In winter, temperature in the country of the Northern Tuareg averages about 10°. The absolute minimum temperature however is very much below this. Thus in Ahaggar the village of Tamanṛaset (1400 m) has in January an average temperature of 11,7°, but an absolute minimum of −6,6°. Frost is very common during winter nights, and even snow may fall in the higher parts of Ahaggar at that time of the year. In the country of the Southern Tuareg frost may also occur, but in Southern Ayr around Agadez frost is said to be very rare and snow is unknown; the winter period 511 in the south is on the whole milder than in the north, where the changes between relatively cold and 164 very hot temperatures, allied with inadequate dwellings and clothes, are responsible for pneumonia and similar diseases, which give rise to frequent deaths – especially among children.

The most important climatic distinction between the countries of Northern and Southern Tuareg is due to differences in the annual precipitation as will be seen from the following figures (in m/m) for the annual rainfall 1931–1945 in the territories of seven Tuareg groups:—

132

Kel Ahaggar		*Kel Ajjer*	
Iwallen	18.6	Ṛat	11.4
Édeles	18.9	Ft. Flatters	13.7
Tamanṛaset	40.7	Ft. Polignac	17.6
		Ġanet	17.8
		Ṛadames	37.8
Kel Adṛaṛ		*Kel Ayr*	
Aġelhok	75.0	Iferwan	74.1
Kidal	123.2	Agadez	179.3
Iwllemmeden Kel Ataram		*Iwllemmeden Kel Dennek*	
Burem	172.0	Tawa	351.4
Meneka	221.5		
Gao (Gewgo)	233.9	*Kel Geres*	
		Tessawa	525.0

Thus the annual precipitation in Tuareg country ranges from 11.4 mm in the north to more than 500 mm in the extreme south. In the territories of the Southern Tuareg there is a fixed rainy season in summer, and although the annual precipitation may vary from one year to another there will always be enough rain for the regeneration of perennial plants and the sprouting of annual herbs and grasses. The territories of *Iwllemmeden* and *Kel Geres* largely consist of savannahs where trees and grasses grow over extensive plains. Compared with this we have entirely different conditions in the north, where the territories of the *Kel Ahaggar* and the *Kel Ajjer* are situated on the extreme frontiers of two different rainfall belts, namely that of the Sudan where rain falls in summer, and that of the Mediterranean with a wet season in winter. Therefore there is no special wet season for the whole country of the Northern Tuareg, the most northern parts of which have maximum rain late in autumn or in early spring, while the southernmost regions have summer rain like the Sudan. Rain from the north may however occasionally penetrate as far into the Sahara as the northern outskirts of Ayr, where during my journey from Ahaggar to Ayr in April 1955, I found pastures of annual plants due to winter rain. As far as Ahaggar is concerned rain has, over an extensive period of years, fallen most abundantly late in summer. But what is characteristic of this region as well as of the territory of the *Kel Ajjer* is the fact that rain does not fall every year. In Ahaggar, including the northern massifs of Immidir (Mouydir) and Ahnet, four years out of ten are almost completely dry (Dubief 1947, p. 7-23), and in the flat plains outside the mountains many years may pass between two rainfalls on one and the same spot. These plains have little or no vegetation of perennial plants and are known to the Tuareg as *ténéré* or *taneẓruft*. In or round the mountain massifs there is always a better possibility of rain, and when rain falls in Ahaggar late in summer it is normally accompanied by violent thunder-storms and is very heavy. This in conjunction with the morphology of the mountains makes a perennial vegetation possible.

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132 When rain is falling in Ahaggar water immediately flows down the rocky mountain slopes into the sandy river valleys, which may become flooded shortly after rain has started. Indeed, the flood will often rise so suddenly and violently that camels and other animals grazing in the valleys are caught by the strong foaming stream of water. Even humans have been killed by the sudden rise of a flood, but most people will not camp in the river bed itself late in summer when heavy rainfalls are expected to occur. A river valley will generally not be flooded for more than one or two days, but it may, after extremely heavy rain, contain water for a week or even longer. This was the case in the summer of 1953 when the valley of Abalessa in Ahaggar turned into an immense river more than a hundred metres
137 wide. Owing to such heavy rainfalls it is possible for perennial plants with a well developed root-system to survive near the river valleys even in dry years. Outside the river valleys there is very little vegetation of perennial plants in Ahaggar. The bulk of the country has no permanent vegetation, and permanent plants are always more abundant along the broad river valleys of the lower country than along the narrow valleys higher up in the mountains.

Pastures of annual plants may spring up almost anywhere in the desert – even in the otherwise barren countries of *ténéré* and *tanezruft*, where they then constitute valuable fodder for the camels of passing caravans. Rainfall in Ahaggar is most common in the highest parts of the country, where, on the other hand, little perennial vegetation is found. In periods of drought this region is so to speak nothing but rocks and boulders, while after rain in summer it becomes covered with a green curtain of annual plants. South of Ahaggar important perennial vegetation is not found until we arrive at the outskirts of the Adṛaṛ and Ayr Mountains, where it is extremely rich compared with Ahaggar. Indeed in Southern Ayṛ trees and bushes may form dense forests in the valleys outside of which there is also some perennial vegetation. The Ayr Mountains belong to a special zone of vegetation termed *sahel* by French geographers (cf. Capot-Rey 1953a, p. 26 ff.). From an economic point of view the main
[132] characteristic of this zone, which includes Ayr and Adṛaṛ, is that it has a fixed wet season and consequently pastures of annual plants spring up every year over large areas. South of Ayr and Adṛaṛ the zone of *sahel* gradually changes into the Sudanese savannah.

137 Tuareg country thus falls into three distinct zones of vegetation with rather different conditions
311 for stock-breeding:—

233 1) *True Desert* comprising the territories of *Kel Ahaggar* and *Kel Ajjer*. Rainfall is irregular, and pastures of annual plants do not spring up every year. The main livestock are goats, while sheep are bred only to a very limited extent, and the nomads have no cattle.

2) *Sahel* comprising Adṛaṛ and Ayr and part of the plains situated between these two mountain massifs. This zone has some of the characteristics of the true desert, but it has a fixed wet season in summer and consequently pastures of annual plants develop every year. Goats are very important and so are sheep; most nomads keep a few cows (zebus).

3) *Savannah* covering mainly the territories of *Kel Geres*, *Iwllemmeden*, and *Kel Tademaket*. Perennial plants grow over extensive plains, and there is a regular spring of annual vegetation. The main kinds of livestock are cows and sheep. In the savannah Tuareg nomads frequently have horses as riding animals, whereas in the two former zones horses are normally bred only by sedentary people. – Camels and donkeys are bred by all Tuareg.

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The climatic and botanical differences between Ayr and Ahaggar can be seen directly from Tuareg division of the year into four seasons each having a duration of about three months. Ayr has a summer season and a winter season between which there are two seasons termed *akasa* (sometimes also called *él, or érafit*) and *ɣarat*. These two words as seasonal terms indicate that rain and annual vegetation in Ayr are recurrent events. For the word *akasa* literally means "green annual plants" while the word *ɣarat* refers to "dry annual plants". The season *ɣarat*, most of which is extremely dry, is followed by the winter season *tigrest* where rain does not fall, though the northern outskirts of Ayr sometimes have a little rain at this season. The transitional period between winter and summer known as *tabsit* is not considered a main season, but it is frequently mentioned by the Tuareg because certain perennial plants germinate at that time of the year. The summer season *éwilen* is extremely hot and rainless. It is the season of defoliation for acacias and various other perennial plants which change their leaves – generally in the way that they do not loose all leaves at one and the same time. Therefore, even in summer most acacias have some green leaves, though in certain places where rain has not fallen abundantly acacias may loose all their leaves in summer. In certain unfavourable regions outside of the Ayr Massif, acacias may even be without green leaves for a few years, but such trees become verdant again with heavy rainfalls. Scattered barren acacias are found mainly to the north of the Massif. The Tuareg say that acacias can survive an extremely long period of drought during which they are entirely dry. But they normally become green again when rainfalls start. The beginning of the rains is known to the Ayr Tuareg as *t'ézeweḳ*.

In Ahaggar the Tuareg reckon with a summer season named *éwilen* and a winter season called *tağrest*. These two seasons are separated by the autumn known as *amewan* and the spring termed *tafsit*. The Ahaggar Tuareg know the words *akasa* and *ɣarat*, but do not employ them for seasonal terms because rain and annual pasture do not recur annually in their country. The summer season *éwilen* is extremely hot, but it is not the proper season of defoliation for acacias, which under favourable conditions are green in summer and defoliate in winter. The autumn *amewan* which follows upon the summer is characterized by less hot temperatures and gradually changes into *tağrest* (winter) when frost is extremely common during night, and snow falls in the mountains. This cold winter season is followed by the spring *tafsit* when many perennial plants germinate.

As will be seen from this description of the year in Ayr and Ahaggar these two countries differ much in regard to climate and plant development. Within each of the two areas there are climatical and botanical zones which are very different.

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The Ahaggar Mountains, according to Maire, fall into three distinct zones of vegetation:— 1) *A Tropical Zone* up to 1700–1800 metres above sea level. 2) *A Lower Mediterranean Zone* between 1800 and 2300–2400 metres above sea level. 3) An *Upper Mediterranean Zone* from about 2400 metres up to 2918 metres which is the extreme altitude of Ahaggar (cf. Maire 1933 & 1940; Lhote 1955, p. 41 f.). This division of the Ahaggar Mountains into zones of vegetation by a learned botanist seems to correspond largely with the division of the mountains into three distinct zones by the Tuareg. These three Tuareg zones and their characteristic perennial plants are the following:—

1) *Abada*, the lower parts of Ahaggar where perennial plants are abundant along the broad river valleys. Trees are very important the main species being various acacias (*abser*, *Acacia Raddiana* &

[text continues on p. 31]

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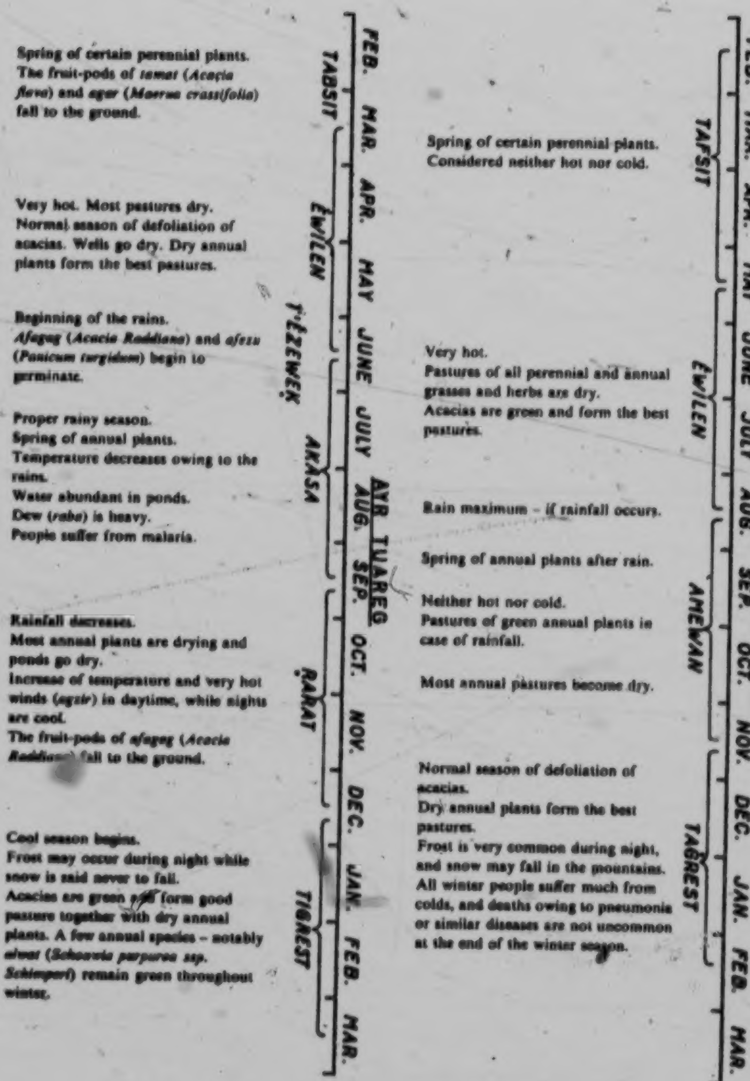

Spring of certain perennial plants.
The fruit-pods of *tamat* (*Acacia flava*) and *agar* (*Maerua crassifolia*) fall to the ground.

Very hot. Most pastures dry.
Normal season of defoliation of acacias. Wells go dry. Dry annual plants form the best pastures.

Beginning of the rains.
Afagag (*Acacia Raddiana*) and *afezu* (*Panicum turgidum*) begin to germinate.

Proper rainy season.
Spring of annual plants.
Temperature decreases owing to the rains.
Water abundant in ponds.
Dew (*raba*) is heavy.
People suffer from malaria.

Rainfall decreases.
Most annual plants are drying and ponds go dry.
Increase of temperature and very hot winds (*agzir*) in daytime, while nights are cool.
The fruit-pods of *afagag* (*Acacia Raddiana*) fall to the ground.

Cool season begins.
Frost may occur during night while snow is said never to fall.
Acacias are green and form good pasture together with dry annual plants. A few annual species – notably *alwat* (*Schouwia purpurea ssp. Schimperi*) remain green throughout winter.

Spring of certain perennial plants.
Considered neither hot nor cold.

Very hot.
Pastures of all perennial and annual grasses and herbs are dry.
Acacias are green and form the best pastures.

Rain maximum – *if* rainfall occurs.

Spring of annual plants after rain.

Neither hot nor cold.
Pastures of green annual plants in case of rainfall.

Most annual pastures become dry.

Normal season of defoliation of acacias.
Dry annual plants form the best pastures.
Frost is very common during night, and snow may fall in the mountains.
All winter people suffer much from colds, and deaths owing to pneumonia or similar diseases are not uncommon at the end of the winter season.

Fig. 14. Division of the year into seasons among the Tuareg of Ayr and Ahaggar. Climatic and botanical characteristics are indicated. The *akasa* season is also known to the Ayr Tuareg as *il* and *trafit*.

tamat, Acacia seyal) and tamarisks (*tabarekkat, Tamarix aphylla & aẓawa, Tamarix gallica* and related species). Other important perennial species are the grasses *afeẓu* (*Panicum turgidum*) and *tullult* (*Aristida pungens*) the latter grass being found especially around the northern massifs of Anhet and Téfedest, and in Tasilé-n-Ajjer. 137

2) *Tarayin*, the middle mountain zone which has the following characteristics:— Acacias are lacking or are very rare and badly developed. The big tamarisk (*tabarekkat*) is lacking while the smaller species (*aẓawa, T. gallica*) is common in certain valleys. Two trees are found which do not grow in the lower zone, namely *tahunek* (*Rhus oxyacantha*) and *aléw* (*Olea Lapperrini*). The *tullult* grass (*Aristida pungens*) is missing and the *afeẓu* grass (*Panicum turgidum*) is scarce.

3) *Atakor*, the highest part of Ahaggar with the following characteristics:— There are no trees with the exception of *aléw* (*Olea Lapperrini*), and there are on the whole very few perennial species while annual species are abundant in case of rainfall.

It should be noted that only the important characteristics of the three Tuareg zones are here mentioned, and I add that a few perennial plants are found within all three zones. Thus the perennial species *aramas* (*Atriplex Halimus*) occurs along the valleys in all three zones, but it is of very low stature high up in the mountains, while it forms very high and bush-like tufts in the lower parts of the country.

In Ayr there is also a change of vegetation according to altitude but a general description of this is rather complicated. The lower parts of the Ayr Massif as well as the southern plains are dominated by acacias (*afagag, Acacia Raddiana & tamat, A. flava*) like the lower parts of Ahaggar, and the *afezu* grass (*Panicum turgidum*) is very common almost everywhere throughout the country, while the *tullult* grass is found only in sandy regions at the eastern slopes of the Massif. Species of tamarisks are extremely rare, and this is true of certain other species which are common in Ahaggar. The trees *tahunek* (*Rhus oxyacantha*) and *aléw* (*Olea Laperrini*) grow only in isolated mountainous parts of Ayr. The extensive plains west of the Ayr Massif around Ingal are dominated by acacias and the *afezu* grass, but these perennial plants become less and less common towards the north, so that the regions around I-n-abanɣerit have very little persistent vegetation but a rich vegetation of annual plants. For further information on the botany of Ayr I refer to the study of Miré & Gillet who describe all known [114] species and indicate their division into particular vegetational zones (Miré & Gillet 1956). I conclude this outline of Tuareg botany with the statement that Ahaggar and Ayr have many important species in common. But there are northern species which do not thrive in Ayr while some southern species are unknown in Ahaggar, e.g., the dum palm *tagayt* (*Hyphaena thebaica*) which plays a great role with the Ayr Tuareg.

Climatically as well as botanically the Ahaggar Mountains are situated on the frontier of two [132] distinct zones, namely the Mediterranean and the Tropical zones, while Ayr is predominantly tropical. This seems true also zoologically, as the Ayr fauna contains a great many species of birds and mammals 136 characteristic of tropical Africa. The bird life of Ayr seems very akin to that of the Sudanese savannah, and, for instance, guinea fowl is extremely common even in valleys of the northern-most parts of the Massif. As example of tropical mammal life in Ayr we may here mention that the wart-hog lives in Central Ayr, and that oryx antelope and giraffe are found in the plains immediately south and west of the Massif. I do not wish here to compare in detail the natural history of Ayr and Ahaggar, but 13

13 would emphasize the fact that climatically, botanically, and zoologically a certain dividing line runs between these two Tuareg countries. This should not be overlooked in an anthropological description of these parts of Northern Africa.

144 At present both fair-skinned europids and black-skinned negroid people live all over the Sahara,
174 and are frequently mixed. There seems to be little doubt that in the north most Negroes have come
in with the slave trade. We cannot entirely exclude the possibility that part of the northern Negroes
in the Fezzan constitutes an ancient population of the Sahara (cf. Capot-Rey 1953a, p. 167 ff.), but
in Ahaggar the ancestors of the present Negroes seem to have arrived later than the fair-skinned
Berbers. Until a hundred years ago all Negroes of Ahaggar were apparently Tuareg slaves bought or
captured in the Sudan, but the negroid *Ḥarratin* then immigrated from Tidikelt to make gardens for
the Tuareg. Another immigration of predominantly black-skinned and negroid agriculturists came
from Tasilé-n-Ajjer and in particular from the oasis of Ġanet. It is not quite certain whether they came
before or after the *Ḥarratin*. – Negro slaves have also been introduced from the Sudan to Ayr by
pastoral Tuareg, but there is no doubt that Ayr originally was a pure Sudanese country anthropologically,
as it is Sudanese in regard to climate, botany, and zoology. In other words, the oldest known
inhabitants of Ayr were Negroes while the fair-skinned Berbers arrived at a later date. It is stated
both by Nicolas and Urvoy that, before the Tuareg, Ayr was inhabited by negroid Hausa or Proto-Hausa
(Nicolas 1950a, p. 45; Urvoy 1936, p. 138 ff.), and Barth claims the word *Ayr* to be relatively
late and of Tuareg origin, the word *Azben* also used as a name of the Massif, to be of Hausa origin
173 and older (Barth 1857, I, p. 369). My investigations seem to confirm these statements. All Tuareg
questioned about the history of Ayr have admitted that the negroid agriculturists have lived in the
192 country before the Tuareg, and in the Berber dialect spoken by these people there are a great many
601 Hausa words. It is, I think, of particular interest that the negroid village population of the *Kel Éwey*
164 group is said to have a kinship system quite distinct from that of all true Tuareg and related to the
system is use among the black-skinned citizens of Agadez. These people draw no distinction between
parallel cousins and cross-cousins, while distinct terms for these relatives are characteristic of true
Tuareg systems (Figs. 293–294).

Stock-Breeding

The aim of this chapter is to describe the general techniques of stock-breeding, and to define the economic role of the various types of domestic animals bred by the *Kel Ahaggar* and the *Kel Ayr*.

GOATS

Goats constitute one of the most important kind of livestock to the Tuareg. Two main breeds can be distinguished. In the south the animals are of relatively high stature and have very short hair in contrast to the northern breed which is relatively small and long-haired. A few animals of the southern breed have been introduced among the Northern Tuareg by caravans from Adṛaṛ-n-Foṛas and Ayr, though this particular breed is not held in very high esteem by the *Kel Ahaggar* who claim their own animals to be superior in all respects. I add that even in Ayr there are Tuareg who claim that the northern animals are better than their own short-haired breed.

According to Lhote the northern breed is found in all the mountain massifs of the Sahara including Ayr, Adṛaṛ-n-Foṛas, and Tibesti (Lhote 1955a, pl. XIII p. 368). However, I have myself never seen such small and long-haired goats in the Ayr Massif where certain animals have a coat of long hair on the hind part of the body, while I have seen animals of the northern breed among Ahaggar Tuareg living in the plains of Tamesna to the west of the Massif. In Ayr the common breed is the short-haired, southern one which is also said to be dominant in the mountains of Adṛaṛ-n-Foṛas. This latter breed has on the whole a very wide distribution south of the true desert country and is found everywhere in the zone of *sahel* and in the savannahs (Doutressoulle 1947, p. 202 ff.). Short-haired goats are also described from the Tebu by Nachtigal (Nachtigal 1879, I, p. 214), but judging by the description given by Le Coeur, the goat-breed of Tibesti seems to be akin to the long-haired northern breed as claimed by Lhote (Le Coeur 1950, p. 152). A comparatively small and long-haired breed among the Berber-speaking Chawiya of Aurès is perhaps racially related to the breed of the Northern Tuareg. The goats bred among Arab pastoralists of the High Plateau and on the outskirts of the Northern Sahara (e.g., the *Ulad Nail*) are very different, of high stature and very heavily built in comparison.

Zoologically the most important characteristic of goats is the form of their horns (Antonius 1922, p. 126 ff.). The hairy breed found among the Northern Tuareg generally have horns formed like scimitars though often curved somewhat more backward. Occasionally horns show a tendency towards a screw-form. The short-haired southern breed most frequently has straight, oblique horns the extreme

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Fig. 15. Goats of the long-haired northern breed. The animals are emaciated and feed on acacias which are almost leafless owing to severe drought. Ahaggar 1955, the *Taytok* tribe.

points of which turn slightly inward and forward. He-goats of both breeds generally have strong oblique horns of screw-form. Both in Ahaggar, Tassili-n-Ajjer, and in Ayr there are in most flocks one or two goats which are born hornless.

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Although goats are bred intensively by the Tuareg they take little interest in these animals. Before the arrival of the French, goats formed the most important currency and, though money has now come into general use, they are still used in payment as for example, to the blacksmiths for the making of bracelets, weapons, and various implements. In Ahaggar goats are also used for certain payments to the *Amenukal* from his vassals, such payments being known as *ehéré*. This word, which is also common in Ayr, means literally "a big flock of goats" (or sheep), but it may equally well be translated as "fortune" or "money".

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Owing to the practical importance of goat-breeding there are a great many terms to designate the animals according to sex, age, and various characteristics. In Ahaggar there are the following age-terms:—

Age	*Female*	*Male*
New-born kid	*amaɣwa*	
Kid from its birth to the appearance of its horns	*téɣeydet*	*éɣeyd*
Weaned kid with horns, and of bigger growth than above	*tazzift*	*azzif*
Weaned kid	*tabunkelut*	*abunkelu*
Animal not yet fully grown	*tabulek*	*abuleɣ*
Animal not yet fully grown	*tadawalt*	*adawal*
Fully grown animal	*tiɣse* (pl. *ulli*)	*ahulaɣ*
Fully grown animal	*taɣat*	

(The common term for a fully grown goat in Ayr; it is used occasionally also in Ahaggar).

These terms are used frequently in discussions of prices. Thus a blacksmith will claim that the price of an axe is *abuleg* (*adawal*) while for the manufacture of smaller objects or for certain repairs he will only claim *sazif* or *éreyd*.

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By the combination of age and colour terms, if necessary with the addition of a covering to certain other characteristics, the Tuareg are able to describe the exact appearance of any animal. Goat-terms have a practical value in enabling the Tuareg to speak about their animals with precision. A few of the terms indicating colour and other characteristics in Ahaggar are mentioned below:—

Characteristics	*Female*	*Male*
Black animal	*tasejjefut*	*asejjefu*
Red animal	*tézeggek*	*ézegger*
Black animal with a red belly	*takahamit*	*akahami*
Animal white on the hind part, and black on the fore-part of the body	*tégehé*	(No term for males which never have this combination of colours)
Black animal with white colour on the lower part of the legs	*tazeburt*	*azbur*
Black animal with a white blaze . . . . (Foucauld, 1951–52, III p. 1194 f., states that this term is used for horses, donkeys, camels, and oxen, but he does not mention goats and sheep)	*tamulast*	*amulas*
Black animal with white colour on the ears	*tahreyt*	*ahrey*
Animal of any colour having very small ears	*tadermak*	*adermag*
Animal of any colour having no horns	*tabiyawit*	*abiyawi*

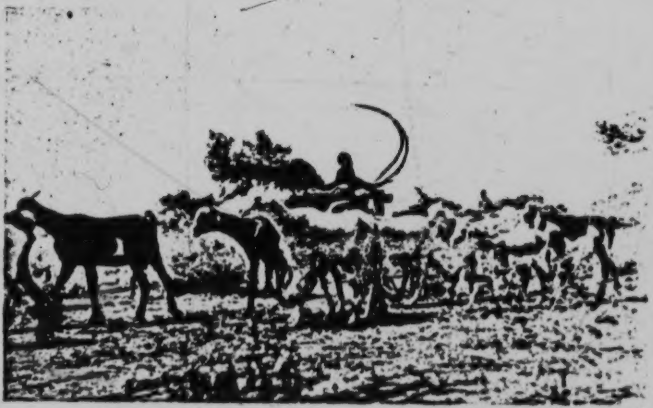

Fig. 16. A flock of southern, short-haired goats during migration. The woman seen in the middle of the picture rides an ox loaded with arches of a barrel-vaulted mat tent. From Demergu south of Ayr.

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*233 192 The actual number of such terms is not known to me, and the Tuareg say they are almost innumerable. A colour term connected with an age term will, as mentioned above, generally be sufficient to describe the appearance of any animal, but colour terms have practical value also in another sense. They are, as the Tuareg put it, like names of men and dogs, and are used by the women to call individual animals to be milked. The names are then followed by a special sound (cf. p. 39, 135).

It is remarkable how intimately goats are attached to their masters. If the flock, as often happens, is grazing alone at some distance from the camp in the evening after darkness, it will immediately gather round the tents, when a special cry is uttered, or if the dogs bark. On the utterance of another cry by the goatherd the whole flock of goats will follow her quickly. On the whole goat herding is easy, and even very big flocks can be guarded by a single boy, or a girl. Kids still too young to follow the flock during grazing normally browse around the camp all day. In Ahaggar and in Tasilé-n-Ajjer these kids will not, as a rule, be let out of the sight of the camp, but this is not so in Ayr where vegetation is very dense in the river valleys. Kids in the latter area easily get lost and eaten by the numerous jackals. In order to know where the kids are a woman, while occupied with her domestic task in the tent, utters at short intervals a sharp, shrill cry to which the kids respond by bleating loudly.

*233 [234] Goats are chiefly useful for the milk they provide. In general, goat-breeding is organized in such a way that the maximum possible milk is obtained by the nomads, and kids are allowed to suck freely only for a short period after birth. At this period a kid is known as *asarwas*, which term is used for all sucklings without restriction. The duration of the entire period of suckling is dependent on the pasture. If grazing is good, the kids will suck for two to four weeks, while under severe conditions the period of suckling may be up to two months.

To prevent kids from drinking more than their proper share of milk the Tuareg use various devices. *233 417 In Ahaggar and in Tasilé-n-Ajjer small kids are frequently placed in stone enclosures (*agror*). Such enclosures are also used to prevent kids from following the mother animals when the flock leaves the camp for grazing in the morning, and they serve as a protection against beasts of prey during the night. They are about one metre high, and have a diametre of about one metre (cf. Fig. 17). Similar stone enclosures are said to exist among the *Kel Ewey* Tuareg but not elsewhere in Ayr, where the Tuareg generally make larger round enclosures from boughs of thorny acacias, so that one enclosure is big enough for all kids of a household. These enclosures are often known as *zeriba* (Ar.), but the proper Tuareg name is *afarag* (in the north *afarağ*). They are said to be used also by certain Northern *233 Tuareg who camp in the lowland where acacias are common. To prevent small kids from running away, get lost or eaten by jackals, the Tuareg may attach them to a tree or to one of the tent-posts by one of their hind legs, which attachment is known as *témdit* among the Ayr Tuareg. Kids are also sometimes tied with a cord around their necks to prevent suckling when the mother animals are resting in the camp. If there are very few kids they are frequently attached to individual cords (sing. *témetrek*), but several kids are also frequently tied to one and the same cord, which is then known as *éseddi* or *aséddi*. Such a cord has several loops into which the heads of the kids are put, while the other end [171] of the cord or rope is fastened to pegs or trees. These methods are not only practised by the Tuareg. I have frequently seen them in use also among pastoral Arabs of the Sahara and of the Algerian High Plateau.

Weaning takes place gradually. Long before the end of the suckling period the kids eat green annual 233* plants around the camp or, if such plants are not available, fresh shoots of acacias and tender herbs brought to the camp by Tuareg women. At the end of the suckling period kids, if very abundant, will sometimes be taken to grazing grounds away from the camp, and the flock of kids will then be forced to live exclusively on plant food. But there are also certain devices to wean kids which graze together with the mother animals. Such devices are normally applied to kids when they are about two months old – at which age the Ahaggar Tuareg claim that kids should also be marked and castrated. These devices to wean kids will now be briefly mentioned.

In Ahaggar and in Tasilé-n-Ajjer kids are generally weaned by means of a small stick placed in the mouth. This stick can be fixed in two ways. It is frequently placed transversally in the kid's mouth and attached at both ends with a thin piece of cord or leather fastened behind the animal's horns (Figs. 18–19). But it may also be placed in the mouth of the kid in a very simple and apparently rather crude way, namely by piercing right through the cheek of the animal (cf. Fig. 20). Both methods are known to the Northern Tuareg as *asedres*, or *akara*, and the latter method of piercing the stick right through the cheek is claimed to be the better, as in this case the stick does not easily fall out. Both devices are practised by other North African stock-breeders.

According to Foucauld the term *akara* is used among the Ayr Tuareg to denote these practises (Foucauld 1951–52, II, p. 848), which allow the kids to graze without any difficulty but effectively prevent them from suckling. But according to my investigations among the *Kel Ferwan* of Southern Ayr, the methods are unknown in their above mentioned forms. Devices to wean kids among these Tuareg are known as *asedres*, or *ameru*, and the most common one consists of a piece of dum palm leaf rolled together and drawn through two holes pierced in the upper lip of the kid, a knot being tied at each end of the piece of palm leaf. Another device consists of a cord of dum palm leaf placed in the kid's mouth and fastened behind its horns, but this method is used mainly temporarily (e.g., during movements of the camp to a new place) when small kids mix with the milk-yielding goats. It is possible that devices as those just described from the Northern Tuareg are also found among [166] certain Ayr Tuareg, for many now living in and around Ayr have immigrated fairly recently from the north. A peculiar method should finally be mentioned. It is described from Ahaggar by Lhote, who states that the Tuareg of that region attach the spiky skin of a hedgehog to the head of kids so that they prick the udder of the mother animals when sucking with the result that the mother animals kick them away (Lhote 1951a, p. 136). The use of spiked devices to wean kids and lambs is certainly not a common method among the Tuareg or among other stock-breeders, though spiked devices are commonly applied to the young of certain other domestic animals (cf. p. 52, 62 f.).

Effective goat-breeding is more than anything else a question of an appropriate birth control of the goats. Although goats, if not mated again soon, may yield milk up to two years after the birth of kids, they give much more milk when they have kids. The period of gestation is about five months, and the same goat may be capable of bringing forth kids twice a year.

There are some Tuareg who always let their goats mate freely, but this is not common practice. With free mating the flock will increase enormously, as most goats bring forth two kids, and the same goat may thus have four kids in a year. But there will then be little milk for the nomads, as milk-

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Fig. 17. A slave-boy takes kids out of the stone-enclosure (*aġror*) to let them suck. Ahaggar, the *Aġuh-en-tehlé* tribe.

*233 yielding decreases after mating. It is said that some goats yield milk in the whole period of gestation, while others have no milk whatever during most of that period.

The advantage of free mating is further reduced because goats, if mated too often, become emaciated, and for the northern breed their coat of long hair, so important to craft (cf. p. 263 ff.), will not develop fully. Added to this, kids born in the hot summer season will often be of inferior quality, as they suffer from heat and the lack of fresh annual plants during their period of growth. Again, the mother animals may yield so little milk in summer that it is not even sufficient for the nourishment of their kids.

The free mating of goats is not generally desirable, and therefore most Tuareg practise a system of regulation which varies with the qualities of pastures. If reproduction of the flock is badly needed it may happen that all goats are mated twice a year, but it is considered an ideal in good years to divide the animals into two parts which bring forth kids and yield milk at different seasons.

*233 In Ayr when the flock is divided into two parts to bring forth kids and yield milk at different seasons,
132 one part brings forth kids during the season of *akasa* when the pastures of annual plants are very
[137] rich, the other at the end of the winter season during the period known as *tabsit* at which time certain other plants germinate, and fruit-pods of the *afagag* acacia (*Acacia Raddiana*), which are extremely good for fodder, fall to the ground. If kids are wanted for a flock during the season of *akasa*, which is the best season for the birth of kids, the goats are mated in winter. When all the she-goats have been covered, the penis of the he-goat is bound around the foreskin by means of a cord – a method which is known to the Ayr Tuareg as *éḳḳan*, to the Northern Tuareg as *urun* (cf. Fig. 25). If kids are wanted for a flock in spring at the season of *tabsit*, mating stops with the binding of he-goats at the

end of the *akasa* season. In other words:— When the inhabitants of a camp have their collectively 233*
guarded goats divided into two parts, one of these brings forth kids at the time when the other is mated. 132

This method of mating-regulation is that ideally used by prosperous goat-breeders both in Ayr and among the Northern Tuareg. If in the north a flock is divided into two parts the kids are born in autumn (*amewan*), and in spring (*tafsit*) the former season being the better. Kids brought forth between these two seasons are known as *amesahar*. But as climatic conditions and consequently also the quality of pastures change from one year to another in the true desert country, the mating-system of division into halves cannot always be practised in Ahaggar and in Tasilé-n-Ajjer. In severe periods of drought goats may be too meagre for mating for a whole year or even longer, during which time the he-goats will have their penis bound. Thus during the dry year 1954/55 no goats were mated in Ahaggar. – It should be noted that the best season for the birth of kids is the late summer or the autumn (*akasa*, *amewan*) when the tender annual plants spring up. Kids borne at this season will be fully grown for mating after one year so that they bring forth kids at the season of spring (*tafsit*, or *tabsit*), while kids born in spring will be mated after a year to bring forth kids late in summer or in autumn (*akasa*, or *amewan*).

Milking takes place twice daily – early in the morning before the flock leaves for grazing, and late 234
in the evening one or two hours after the return of the animals to the camp. Milking is done by women, 462
or occasionally by male slaves. The individual animals to be milked are frequently called by their
names and a special sucking sound is made to calm the animals, which are milked differently in Ayr 192
and Ahaggar. In Ahaggar the milk-maid holds the wooden milk-bowl (*akus*; Fig. 21b) in her left 184
hand, presses the left hind leg of the goat firmly under the upper part of her right arm, while she milks 415
with her right hand (Fig. 23–24). In Ayr milking of goats is frequently performed in a standing position the milk-maid then holding the milk-bowl (*takabart*; Fig. 37) in her left hand, keeping the left hind leg of the animal firmly between her knees, and milking with her right hand. If the milk-maid milks

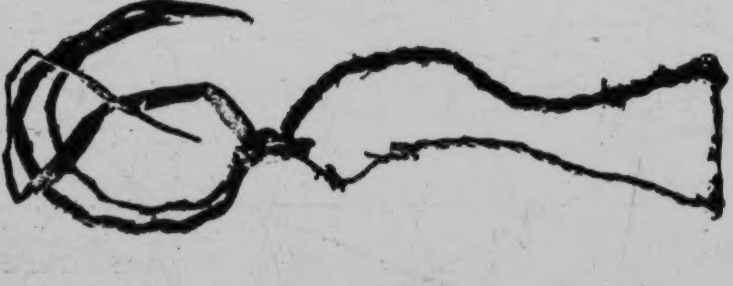

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Fig. 18. The little stick (*akaru*, *asafres*) used by the Northern Tuareg to prevent half-grown kids from sucking. Ahaggar, the *Aguh-en-tahlé* tribe. Dimension: the stick 0.056 m; the cords 0.330–0.380 m. (N.M. G. 5825).

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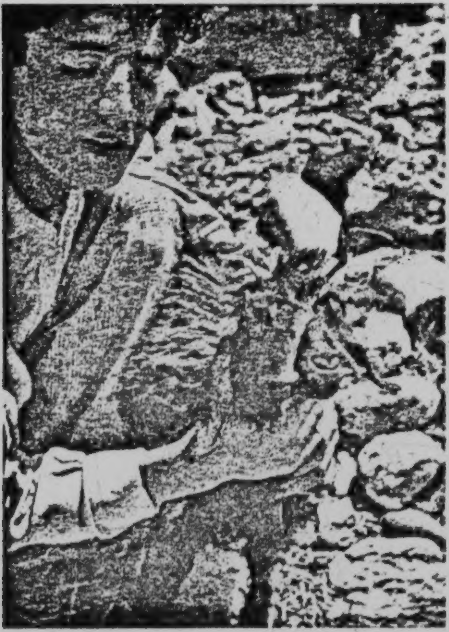

Fig. 19. Photograph illustrating how the stick (*akara, aseḍres*) is attached to the head of a kid. This photograph shows the semi-nomadic Berber-speaking *Chawiya* of Aurès.

234 [262] squatting, she puts the left hind leg of the goat between her right thigh and calf. Goat-milk is drunk, added to food, or made into butter and cheese as described in detail p. 221 ff. Both in Ayr and in Ahaggar it is claimed that goats under favourable conditions yield about two litres of milk a day. But this is to be considered the maximum yield obtained only from goats with young kids when fresh-green annual pasture is available.

*233 [262] Meat is not a staple food among the Tuareg. Most of them are reluctant to kill their animals except at certain feasts. But most meat eaten by the Tuareg is goat's meat. In Ayr I was told that some pastoralists keep their goats as well as other domestic animals as long as possible, that is until the animals die a natural death. However, the Tuareg are generally not so irrational. They say that goats may live for about twenty years, and that they are capable of bringing forth kids and yield milk until 15 years old. When goats have reached that age they are sold or killed, but many Tuareg prefer for obvious reasons to keep their milk-goats only to an age of eight or ten years. There is a limit to the number of goats that can be bred by the members of a small camp, because it is not possible to have more than a certain number of goats in one and the same flock, and there will not always be sufficient labour to tend several flocks. Therefore it is evidently preferable to substitute old milk-goats with

younger animals which yield more milk. Again, the meat of very old goats is of inferior quality. Much 233*
goat-meat derives from he-goats of which a very limited number is needed for mating. Some Tuareg [262]
claim that one he-goat is able to cover about a hundred goats, but as a rule I doubt whether it would
be called upon to do so. In any event, too many he-goats are brought forth, and even very young
male kids are frequently killed and eaten as there will be more milk for the nomads when such animals
do not have to be suckled. It is considered ideal that male kids which are not needed for reproduction,
and which are not killed at very early age, should be castrated at the time when weaning takes place,
but even old he-goats may be castrated to make them fat for slaughtering.

Though meat is not a stable dish of the Tuareg they have to kill a certain number of goats every 237
year to obtain skin for the manufacture of various domestic utensils. The roaming life in the desert [415]
necessitates a great many containers for water, butter, milk, grain, dates, and the like, and bags made
from goat-skin are appropriate for this purpose. Indeed, goat-skin is so important to Tuareg craft
that in speaking of the manufacture of most domestic articles one can hardly avoid mentioning the
word "goat". Thus, my fairly large collection of ethnographic specimens from the Ahaggar Tuareg [126]
contains about fifty different objects made entirely or mainly of goat-skin, which is also used for the [342]
manufacture of tents among the Northern Tuareg. Even nowadays, a few articles of dress are made [291]
from goat-skin, and goat-skin was in general use for this purpose in the past (cf. p. 287 ff.).

Goat-hair is extremely useful to the Northern Tuareg. The hair is cut once a year in the hot season
when the animals do not suffer from cold (cf. Fig. 98). It is spun into strong cords used for tethering [283]
animals, for tying up caravan loads, for reins, and the like. In certain tribes of Ahaggar it is also used [286]
for a very primitive kind of weaving (cf. p. 265 ff., Figs. 209a–b).

To understand the economic role of goat-breeding one must briefly touch on the question of size 233*
of flocks. Statistics concerning the ownership of livestock must always be regarded with much suspicion, 128
as it is extremely difficult to obtain data. It is not only most impolite to ask Tuareg about the size of

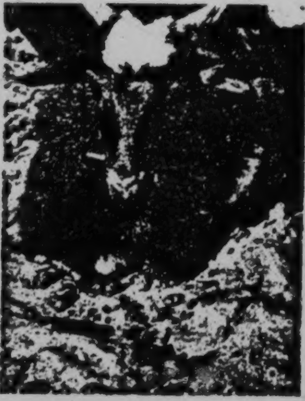

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Fig. 20. A kid with the stick (*akara, asedres*) pierced through the mouth as described in the text. Tasilé-n-Ajjer, the *Kel Terurit* tribe.

*233 their flocks, but it is, on the whole, inproper to show any interest in their animals. Some nomads will 128 even claim that although they know all their goats by sight, they do not know, or never mention, the [172] total number of their animals, as this is believed to bring bad luck. This belief is probably explained by the idea of the evil eye. To this may be added that it is difficult to judge the ownership of goats by merely watching the flock of a household which may also have animals grazing on other pastures.

*233 According to official statistics for 1948, the average number of goats per household among the *Kel Ahaggar* is fifteen (Capot-Rey 1953a, p. 265). This figure is probably derived from the tax lists, and it seems to be much too low – even when households of slaves and sedentary agriculturists are included. Lhote has stated that the number of goats per person, under ideal conditions, is 35–40. If they increase above this, the surplus is slaughtered or sold to the sedentary peoples of the oases (Lhote 1951a, p. 9). This latter figure for ownership of goats under ideal conditions is probably true for the *233 more wealthy Tuareg of Ahaggar. Thus among the vassal Tuareg of the *Dag Ṛali* tribe many house- 565 hold are said to possess 100–200 goats, but this tribe is considered extremely rich in goats, and households of other tribes will not generally own so many animals. From rough calculations made in a great many camps of vassal Tuareg, and Tuareg of the *Iseḳḳemaren* class, I estimate that households on an average possess 60–70 goats when pastures are not too badly developed, for it must be emphasized that the size of flocks changes with climatic conditions. For the sedentary agriculturists of Ahaggar I estimate, on the basis of calculations made at Amsel, Abalessa, and Taṛhawhawt, that a household possesses on average 15–20 goats.

234 In good years the amount of milk products supplied by a flock of 60 goats is rather considerable. This is clear when we consider the fact that a goat, during the period of three to four months in autumn and early winter when pasture of annual plants is green, will yield up to two litres of milk every day. When annual pasture gets dry the milk yield decreases but milk is still comparatively plentiful [272] and important for food all the winter. In summer, however, there is little milk for reasons already *233 referred to, and in dry years goats, even in the cold season, yield little or no milk. The flocks decrease during such periods of drought and some nomads may even lose most of their animals. During my stay among the Tuareg of Ahnet and Ahaggar from November 1954 to April 1955, goats suffered much from lack of fodder. In many camps one or two goats died of hunger every day.

*233 The Ahaggar Tuareg cannot subsist entirely on goat-breeding because severe droughts occur 731 frequently in their country. During drought-periods the goats are so to speak valueless as subsistence for the nomads. But it is remarkable that goats emaciated in consequence of severe drought quickly grow fat and start to yield milk once rain has fallen abundantly enough for the regeneration of pastures. In connection with this we shall point to another characteristic of goat-breeding: The animals have a very short gestation period, and the kids are fully grown for mating in one year. And as one goat may have four kids annually with free mating, a household, which has lost most animals during a drought, will be able very quickly to re-establish a flock large enough for its needs.

*233 Goats are also highly important for the subsistence of the pastoral Tuareg of Ayr. I do not know of any statistic material about the size of flocks in this area, but for Tuareg of Kidal (Adṛaṛ-n-Foṛas) flocks are officially estimated at 74 goats and sheep per household (Capot-Rey 1953a, p. 269), and this region is environmentally related to Southern Ayr. The *Kel Ferwan* Tuareg say that a household

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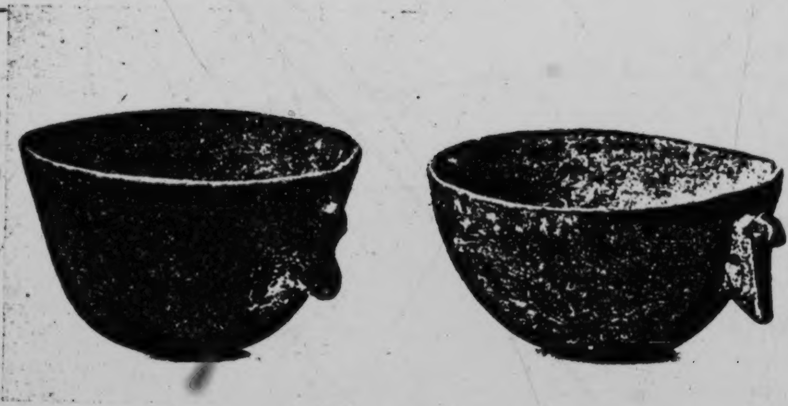

Fig. 21a–b. Milk-bowls (*akus*, pl. *ikassen*) which are used for milking and for milk drinking.

[184] a. A bowl made of burned clay like an ordinary earthen pot. These bowls are never used by pastoral Tuareg but by a few sedentary agriculturists of Ahaggar who also manufacture them. Ahaggar, Tamanṛaset. Dimension: 0.120 m high with an upper diameter of 0.187 m. (N.M. G. 5821).

[824] [463] [184] b. A bowl cut of the wood of the *tabarekkat* tamarisk (*Tamarix aphylla*). It is made by a blacksmith, but certain Tuareg women cut similar bowls which are common in all camps of pastoral Northern Tuareg. Such milk-bowls are unknown among the Ayr Tuareg. Ahaggar, the *Ağuh-en-tehlé* tribe. Dimension: 0.102 m high with an upper diameter of 0.199 m. (N.M. G. 5199).

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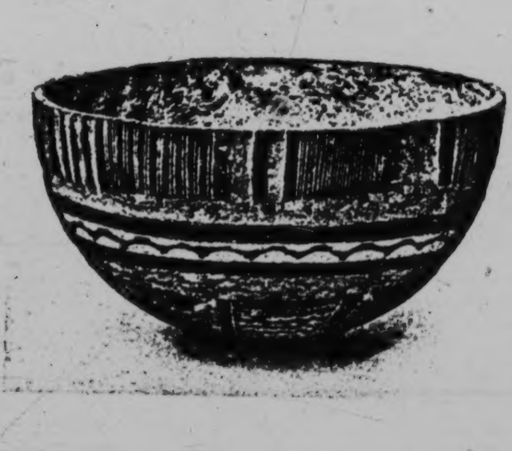

Fig. 22. Calabash of a type which is used occasionally for milking in Ahaggar. It is called *ateklas* (*we n akh*) or *ateklas* (*we n tazek*), that is "calabash for milk, or "calabash for milking". Introduced to Ahaggar from the south and bought at Tamanṛaset. Dimension: 0.110 m high with an upper diameter of 0.195–0.203 m. (N.M. G. 5823).

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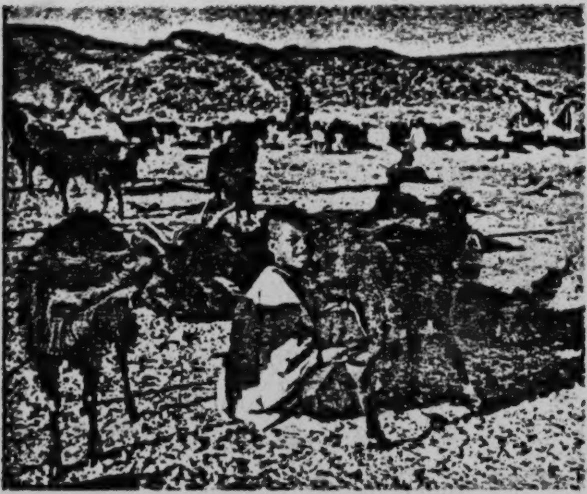

Fig. 23. Slave boy milking goats – a task which is normally performed by women. The milk-bowl is held in the left hand, and the milking is done with the right hand, while the goat's left hind leg is held fast beneath the right upper arm. Ahaggar, the *Aguh-en-tehlé* tribe.

GOAT MILKING

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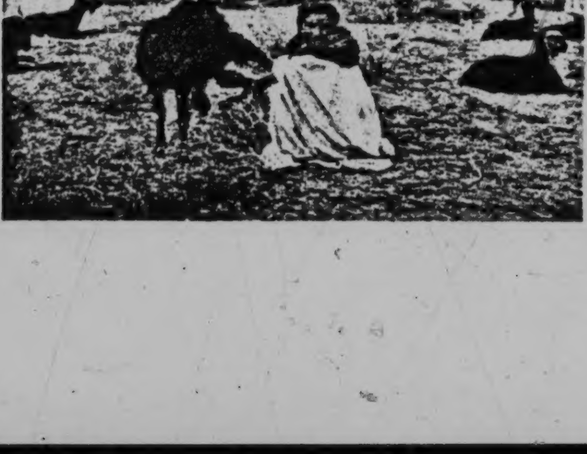

Fig. 24. Tuareg milkmaid milking a goat as described Fig. 23. Ahaggar, the *Aguh-en-tehlé* tribe.

to be considered rich in goats (and sheep) should own about 300 animals. They also say that in the past the Tuareg of their group owned more goats (and sheep) than nowadays. 233* A household at that time might even possess up to a thousand animals, but it would not have many camels and very few zebus, or none. In Southern Ayr, according to the Tuareg, there has been no severe period of drought 132 within the memory of man, and goat-breeding is consequently a much more stable industry than in the desert proper.

SHEEP

Sheep are very important domestic animals to most North African pastoralists. In the Atlas and on the outskirts of the Northern Sahara sheep belong to various woolly breeds. 171 Woolly sheep are also known in isolated parts of the Western Sudan around Macina south-west of Timbuktu (Doutressoulle 1947, p. 191 ff.). I have myself seen many woolly sheep along the Niger between Niamey and Ayoru – among the Zerma-Sonray and other semi-sedentary peoples – but I have not seen them in the camps of pastoral Tuareg and *Bélla*. These sheep belong to the so-called "Goundoum" breed (Zerma) and according to Doutressoulle they constitute a degenerate type of the Macina breed (cf. Doutressoulle 1947, p. 195). It is recorded by Aymard that there are some woolly sheep among the south-western Tuareg (Aymard 1911, p. 118). However, Tuareg sheep in all other groups belong exclusively to the hairy breed which is known as *Ovis longipes*.

It is admitted by zoologists that *Ovis longipes* characterized by a short cover of hair, high stature, and a long thin tail, is the oldest known type of domesticated sheep (cf. Adametz 1920, p. 59 ff.; Antonius 1922, p. 213 ff.; Hilzheimer 1936, p. 199; Doutressoulle 1947, p. 196). In North-western Africa this hairy sheep falls into two types:— (1) The rams have large circular or snailshell-formed horns. This is the breed known to all Northern Tuareg, the Ayr Tuareg, and the *Kel Geres*, and apparently also to other Southern Tuareg. (2) The rams have very long horns of corkscrew form which protrude horizontally. This type is found among some Southern Tuareg, and it is occasionally seen in Tuareg camps immediately south of the Ayr Massif. The Ayr Tuareg say that this breed is typical of the Fulani, and this is in agreement with Doutressoulle's statement (Doutressoulle 1947, p. 200). This latter type of *Ovis longipes* sheep is also known among Nilotic peoples of the Anglo-Egyptian Sudan, and it seems to have been known in Ancient Egypt. It is perhaps the oldest type of *Ovis longipes* sheep (cf. Adametz 1920, p. 59 ff.).

In Ahaggar and Tasilé-n-Ajjer sheep are of relatively little importance to pastoral Tuareg. I believe that very few Tuareg of these regions have more than one sheep to ten goats. The reason for this lies in climatic conditions, for effective sheep-breeding is not possible where pastures do not regenerate regularly, as sheep cannot feed properly on the thorny acacias as can goats. Conditions of sheep-breeding are much more favourable in Ayr than in the north, and certain pastoral Tuareg of Southern Ayr have more sheep than goats, though sheep in Ayr suffer from lack of fodder in the dry hot season when they are extremely thin and meagre. With good grazing sheep yield more milk than goats, but 262 otherwise goats are better milch animals. The meat of sheep is considered superior to goat meat, and

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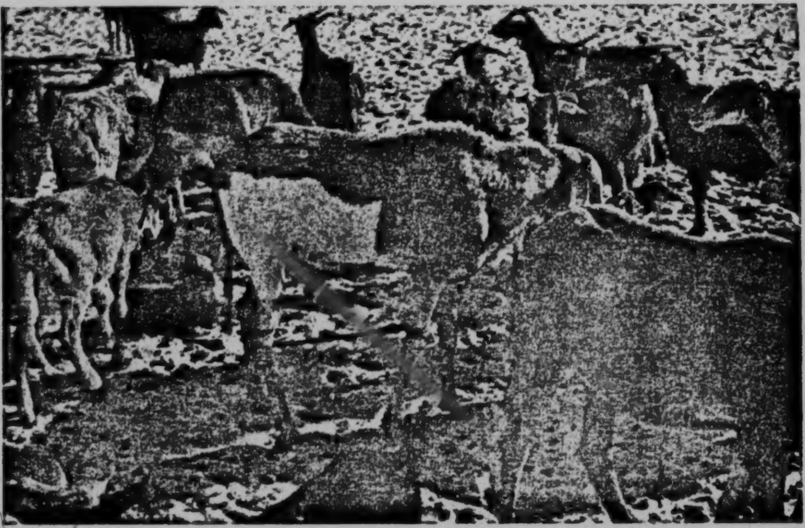

Fig. 25. Ram prevented from mating by means of a cord (*urun*) tied around the foreskin of the penis and also around the scrotum. A longitudinal hobble-rope (*amahus*) also serves to prevent copulation.
Tasilé-n-Ajjer, the *Kel Teruri*t tribe.

[435] the price of sheep for slaughtering is very high compared with the price of goats. Sheep are also con-
[782] sidered the proper animals for Islamic sacrifices, and it should be added that sheepskin is considered
[237] very suitable for the manufacture of certain articles (cf. p. 288 & p. 298; Figs. 232, 240).

[825] The Tuareg say that sheep are more "stupid" or less "intelligent" than goats. Sheep do not respond to their names, they get more easily lost during grazing, and they do not return to the camp by themselves. It is difficult to herd sheep if there are no goats in the flock. Among the Tuareg, as elsewhere in North Africa, sheep and goats are normally mixed in one flock. The goats then always march at the head of the flock, obeying the orders of the herdsman, while the sheep follow behind. It may happen, however, that goats and sheep become divided during grazing, as goats march too quickly for sheep to follow them, while on long journeys sheep show more endurance than goats.

The techniques of sheep-breeding are largely identical with those of goat-breeding mentioned above.
234 It should be observed, however, that goats can be milked without any difficulty whether they have kids or not, while this is not always so with sheep. It is said that they are more easily milked when they have lambs. Both in Ahaggar and in Ayr I have noted more than once that a good milch-sheep which had lost its lamb was given another lamb belonging to a sheep yielding less milk.
*233 Sheep can lamb until an age of seven or eight years, but it is considered appropriate to kill them for

food or to sell them when they are five years old. Many rams are killed or sold at a younger age, and 233* male lambs are frequently killed when half-grown, but the Tuareg do not kill very young lambs.

It is well known from literature that pastoralists of Tibet use sheep as beasts of burden (several authorities; cf. Bell 1928, p. 116; Hermanns 1949, p. 84). Among the Tuareg sheep are not used for [192] this purpose, but I have seen herdsmen attach their empty water bags to the belly of rams, which are very tall, strong animals.

CATTLE

The oldest African cattle is believed to have been a type of the *Bos primigenius* breed characterized 233* by comparatively long horns. This breed was known in Ancient Egypt, and also in Prehistoric Sahara, 174 where its former existence is documented by numerous rock engravings (cf. Monod 1932; Gautier 1908; Lhote 1955a, 1958; Erman 1922; Faulkner & Epstein 1957, p. 142 f.). It seems as if cattle of this particular type was found in parts of North Africa even in antiquity (Bates 1914, p. 95 f.), and we can adequately quote Faulkner & Epstein on the former distribution of humpless longhorn cattle in the north: "All along the shores of the Mediterranean, from Palestine through Egypt to North West Africa, and from Asia Minor through the Balkans to the Appenine and Iberian peninsulas, an ancient stratum of longhorn cattle can be traced, extending to the north and south as far as Mediterranean man or his culture spread" (Faulkner & Epstein 1957, p. 143). *Bos primigenius* cattle are 233* still found in certain parts of Africa. It is known in isolated regions of the Western Sudan – notably 171 in Guinea and Liberia (cf. Doutressoulle 1947, p. 79 ff.; Faulkner & Epstein 1957, p. 87 ff.; Johsi, McLaughlin & Phillips 1957, p. 118 ff.). It is perhaps this breed to which Maqrizi refers in his description of the Beja (Maqrizi, p. 561). The very special thick-horned Lake Tchad breed is probably to be considered a *Bos primigenius* type (Doutressoulle 1947, p. 88 ff.; Faulkner & Epstein 1957,

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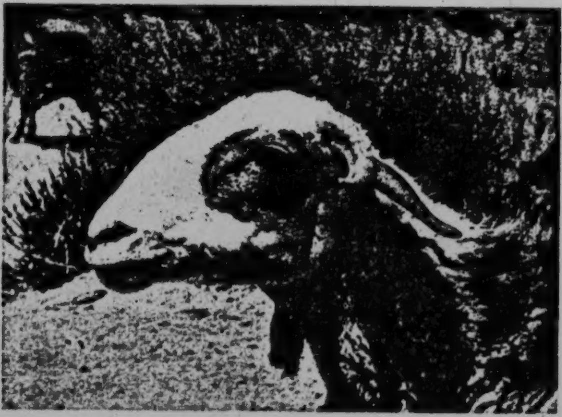

Fig. 26. Young ram of the hairy *Ovis longipes* breed. Ahaggar.

[text continues on p. 49]

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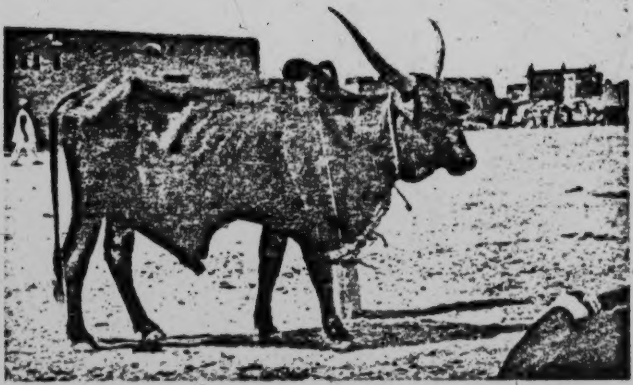

Fig. 27. Zebu ox of the long-horned Fulani breed. Ayr, Agadez.

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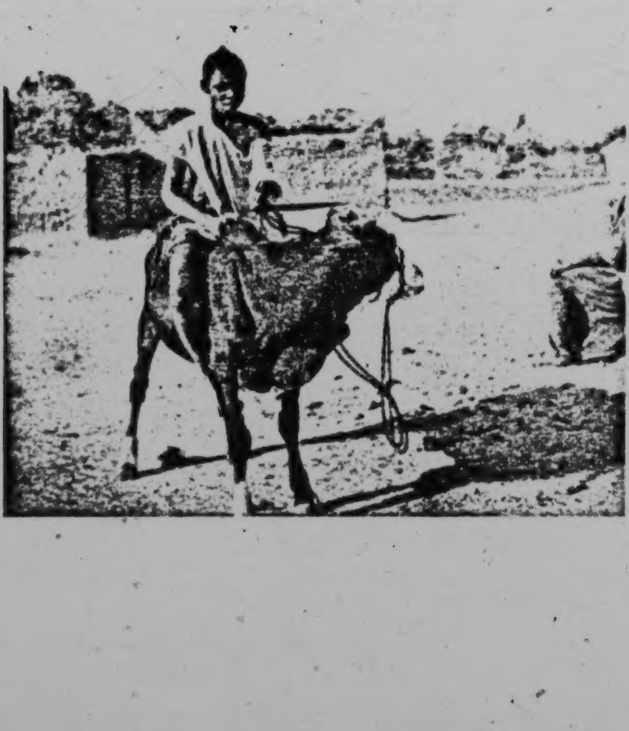

Fig. 28. *Hartani* boy riding a young ox. Ahaggar, Tamanrasset.

p. 93 ff.), and this seems to be true partly also of the so-called Watusi-cattle and related breeds, which 233* have been mixed with zebu-cattle and therefore frequently have well developed humps (cf. Adametz 171 1920, p. 10 ff.; Faulkner & Epstein 1957, p. 148 ff.; Johsi, McLaughlin & Phillips 1957, p. 146, 178, 259).

Adametz believes that zebus were introduced into Africa from Northern India about 2000 B.C. 233* (Adametz 1920, p. 10 ff.). Nowadays Zebus no doubt form the most important types of cattle in [174] Africa, and Tuareg cattle are of the zebu type. The West African zebus fall into a number of subbreeds described in detail by Doutressoulle. The zebu type found in Ayr and adjacent regions and also introduced into Northern Tuareg country is known as the *Azawaṛ* breed (Doutressoulle 1947, p. 102 ff.). In Southern Ayr, which nowadays has a fairly large population of pastoral Fulani, a particular type of zebu is also very common. This zebu is characterized by very high stature and extremely long horns often resembling the form of a lyre (Fig. 27). This breed is named Borodji, Bororo, or M'Bororo. The Fulani zebu is esteemed by certain Ayr Tuareg because of its fatter milk, but it is [262] claimed that its meat is not so delicious as that of their own cattle.

Pastoral Tuareg of Ahaggar and Tasilé-n-Ajjer do not breed cattle (zebus), which do not thrive in their barren countries where pastures of annual plants do not regenerate annually. An attempt to breed zebus among the pastoral Ahaggar Tuareg some years ago failed, and zebus are nowadays found only among settled agriculturists who use these animals as draught-animals at irrigation wells (p. 189; Fig. 132 a-b). A few agriculturists also have cows to raise calves, and to utilize their milk. It is comparatively easy for settled agriculturists of Ahaggar to keep cattle. In dry years, and when pasture is scarce and dry in the hot season, cattle can be fed on vegetables and the straw of certain plants grown in the garden. It can also be mentioned that many agriculturists live in the very broad river [361] valleys of lower Ahaggar where water is not very deep under the sand, and at some agricultural settlements there are even permanent springs. In such places (e.g., the settlements of Abalessa and [137] Amsel) there are even in dry years fresh grazing of a few permanent plants suited to cattle, notably the four following species: – *tahlé* (*Typha elephantina*), *tésengelt* (*Saccharum Ravennae*), *ilegga* (sing. *aleggi*) (*Scirpus Holoschoenus*), and *taṛsest* (*Eragrostis bipinnata*). The regeneration of these plants is not dependent upon annual rainfall, for the soil is always sufficiently humid for their annual regeneration. Therefore it is very common in Ahaggar (e.g., at Abalessa and at Amsel) to burn down the old [324] dry plants late in winter so that new fresh plants can germinate in spring. This method of renewing pasture by the burning down of old dry plants is not generally possible in desert countries. In Ahaggar it is practised only for the four above mentioned species within very limited humid areas, and the method is said to be entirely unknown in Ayr.

The Ahaggar agriculturists who possess oxen very frequently use these animals for riding, sitting [492] on the hind part of the animals which are kept under control by means of a rein (*taẓerkit*) placed through their nostrils, or by means of a halter. No saddle is used apart from a casual piece of cotton, or a blanket (Fig. 28). In Tasilé-n-Ajjer, it is said, the settled farmers have no cows but only bulls and oxen to be used at irrigation wells, and these animals are not used for riding as in Ahaggar.

The zebus found in the settlements of northern agriculturists are all introduced from the south where conditions for ox-breeding are much more favourable. Many, and perhaps most, northern zebus have come from Ayr from which region they are still introduced to Ahaggar and Tasilé-n-Ajjer.

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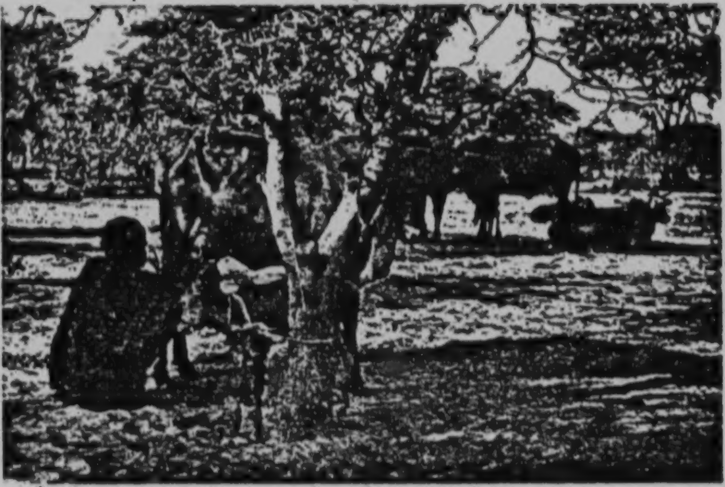

Fig. 29. Milking a cow. The calf is attached to a tree by means of a cord (*témetrek*) around its neck, the mother cow being attached to the same tree with a cord (*ayan*) around its horns.
Ayr, Tuareg of the *Kel Ferwan* group.

233 Zebus are able to cross the barren desert country of the Sahara in winter, and even with so hot a temperature, as that prevailing at the end of April, I have met Ayr Tuareg of the *Kel Tédalé* tribe leading zebus from Northern Ayr to Tamanrasset in Ahaggar.

The Ayr Tuareg seem to admit that they have always had zebus, but they say that in the past they had very few cattle. Nowadays there are zebus in so to speak all camps and villages of the Massif and in the plains to the west of it. At the village of Iferwan sedentary farmers possess three to four animals per household, and figures are much bigger for households of true pastoralists. It is quite normal for a nomadic household to possess a dozen zebus, and this is true even of pastoral Tuareg roaming in the northern outskirts of Ayr where precipitation is lower than in the south.

In fact zebu-breeding is a very profitable industry to the nomads, the more so as very little work is connected with it. The animals leave the camp early in the morning to return again entirely by themselves in the evening before darkness. They are never accompanied by herdsmen as there are no beasts
[171] of prey strong enough to attack them nowadays. I have met Tuareg who were evidently very fond of their zebus, but they never showed the same interest towards their cattle as do the Fulani, who always accompany their herds. During grazing Tuareg zebus normally roam freely, but certain animals which are difficult to get hold of are provided with a cord (*ayan*) around their horns to which cord is attached
[366] a long piece of wood trailing on the ground. When oxen are driven to the market place (at Agadez
or Ingal) for selling,

or Ingal) for selling, they are also frequently provided with a wooden prong (*aburl*) loosely attached 233*
around one foreleg to prevent them running away. I have never seen this practised among the Fulani [171]
who have much more control over their cattle than have the Ayr Tuareg.

Cows continue to bring forth calves and yield milk until they are about 15 years old, and the duration of their life is estimated at about 20 years. But it is considered appropriate to keep milch-cows until they are ten or twelve years old when they should be sold or killed. The period of gestation for cows is about ten months, and there is no regulation of mating. The Tuareg say that cows will be on heat and mate again shortly after the birth of a calf, and that milk-yielding does not stop until five months after mating. Free mating of the cows agrees well with Tuareg interests as prices of calves are high. [435]

Milking of cows takes place twice daily and is generally done by women – in rare cases by men. 234
Milking is performed as follows:— Just before the herd returns from grazing in the evening every [462]
calf is firmly attached to a tree by means of a cord (*témetrek*) around its neck so that it cannot reach the udder of the mother cow. When milking is to take place the mother cow is attached to the same tree by means of a cord (*aṛan*) around its horns. The calf's rope is now loosened and it will immediately start to suck while the milk-maid fastenes another rope or cord (*akarah*) around the hind legs of the cow. When this is done the calf is attached to its tree again, and milking begins. The milk-maid squats at one side of the cow (generally at the right side) holding the large milking bowl (*akabar*) (Fig. 37) between her legs and knees, and milks with both hands (Fig. 29). When the milk-maid has taken the milk she wants she releases the calf to let it drink what is left in the udder, but the calf is thereupon attached to its tree again in order that it may not suck during the night. Before the cows leave the camp in the morning milking is performed again as just described, but it may happen that the cows leave for grazing already during the night, and they are then not milked again until next evening. Tuareg who possess a great many calves may guard them within a so-called *zeriba* (*afaraṛ*) made of [412]
thorny acacia boughs.

Most cows will not yield milk unless they have their calves close to them. If a cow loses its calf it [237]
may be replaced with the calf of another cow so that milking can be done, but it is also common to use the so-called dummy-calf (*azeyuz*) made from the dead calf's skin stuffed with hay. This puppet is then set close to the cow which is deceived by it. It feels that its calf is standing by, it licks the skin, and milking can then be done without much difficulty.

The dummy-calf is not used by the zebu-owning agriculturists of Ahaggar, though I have met one of these *Ḥarratin* (*Izeggaren*) who had once made a calfskin-puppet after he had seen the method practised among *Ifoṛas* Tuareg at Kidal. The method of blowing into the cow's vulva is known to the Ayr Tuareg as *askuf*; it is used particularly for cows which are difficult to milk shortly after the birth of a calf. During migrations, when young calves march together with the mother cows, suckling is prevented by means of a piece of dum palm leaf attached around the calves' mouths. Such an attachment known to the Ayr Tuareg as *adabaṛ* may be used also for other domestic animals.

Weaning of calves takes place according to one of the following methods:— (1) *ikembar*, that is 233*
cuttings made with a knife in two or three places on the bridge of the calf's nose. The wounds of these cuts hurt the calf when it tries to suck, but the method is effective only for a very short period until the wounds have healed. On adult animals the scars of these wounds appear as small bumps (Fig. 30).

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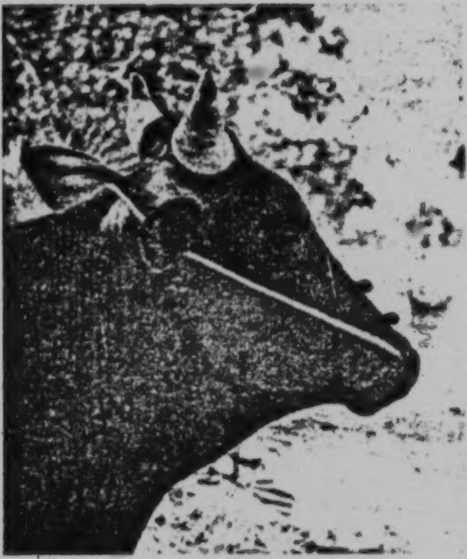

Fig. 30. Young zebu ox with *ikembar*, that is cuts made with a knife on the bridge of the animal's nose, and with a cord (*asabar*) placed through the nostrils. Ayr, sedentary *Kel Ewey* Tuareg near Agadez.

(2) *tabellut*, that is a small pronged stick about 40 centimetres long placed through the nostrils of the calf which is thus prevented from reaching its mother's udder (Fig. 31). (3) *ikemban*, that is two small pointed sticks crossing each other and attached over the calf's nosebridge. When the calf tries to suck it hurts the udder of the mother cow which will kick the calf away. I have only seen this device once in Southern Ayr, and I am not quite sure that the term mentioned is correctly spelled, as I did not take it down in *tifinaṛ*. (4) *akimbab*, that is a muzzle. It is not in general use among the Ayr Tuareg though they know of it. It is in current use among the Tuareg of the plains west of the Massif (Tamesna) [184] where I have seen it among the *Ireṛenaten* Tuareg, who politically belong to the *Kel Ṛela* drum-group of Ahaggar (Fig. 32). [631] I have seen the same device also known as *akimbab* among the *Kel Tahabanat* of the *Western Iwllemmeden*. Similar muzzles are used among the *Iwllemmeden* around Menaka (Musée de l'homme, nos. 36.44.50 & 41.19. 1111–1114) and also among the Tuareg of Adṛaṛ-n-Foṛas (Musée de Neuchâtel, no. 49.2.39). – These are the weaning devices used in Ayr, the method most commonly applied being that known as *tabellut*, the small pronged stick passed through the calf's nostrils.

234 [262] Cow's milk is drunk fresh, added to food, or made into butter and cheese according to methods described in a later chapter. The Tuareg say that an extremely good milch-cow yields up to seven litres of milk a day. This agrees with Doutressoulle's statement that cows of the *Azawaṛ* breed yield six to eight litres daily at the beginning of their lactation period, while at the end of this period the daily

yield decreases to about two litres (Doutressoulle 1947, p. 104). It should be added that, as for other 234
domestic animals, the daily yield of milk depends very much on the conditions of pastures, and cows always yield little milk when pastures are dry – even at the beginning of their lactation period.

Bulls are frequently castrated two or three years old to be used for riding and transportation. Oxen 492
are used for this purpose particularly among the Tuareg of the plains towards the south and west, [232]
while most pastoralists of the Massif almost exclusively use donkeys and camels. Oxen are ridden [184]
without a saddle. The rider sits on the back of the animal which is covered with a blanket or a piece of cotton as in Ahaggar. The animals have a cord (*asabar*) placed through their nostrils, but plaited halters (*amerar*) are also used for riding oxen.

The Tuareg have terms to cover the age and sex of their cattle, and they also have a certain number 233*
of colour terms; but they say that there are very few colour terms for cattle (about ten terms according 192
to Tuareg of the *Kel Ferwan* group). They explain this lack of colour terms by the fact that cattle did [433]
not play any important rôle to their subsistence in the past. Cattle do not respond to their names, but [178]
some of them will come to the camp on the utterance of a certain cry (cf. p. 135).

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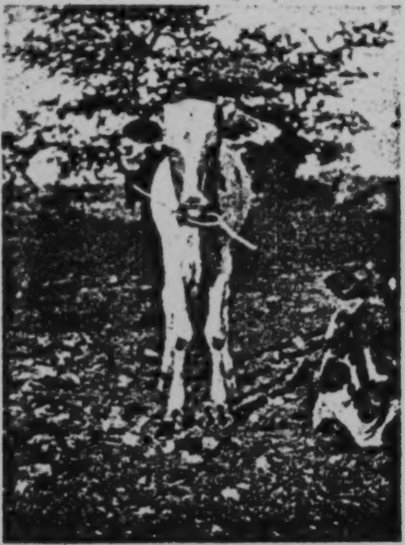

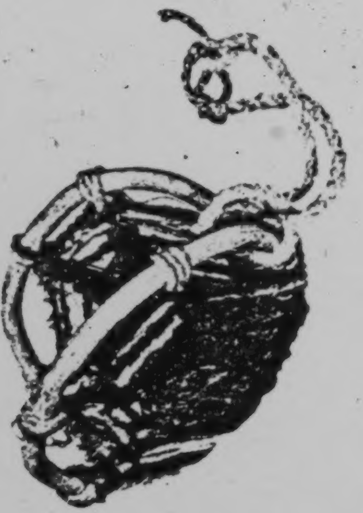

Fig. 31. Zebu calf with a pronged stick (*tabellut*) put through its nostrils to prevent sucking. Ayr, the *Isakaranan* tribe.

Fig. 32. Muzzle (*akimbab*) to wean zebu calves. The muzzle is made of boughs of the *tamat* acacia (*Acacia flava*) which form a frame covered with cords of *tamat* bast and with cotton strips. It is fastened to the head of a calf with a piece of cord plaited of goat's hair, and the attachment is done in such a way that the calf can graze without difficulty though it cannot suck. Tamesna, Ahaggar Tuareg of the *Irefenaten* tribe. Dimension: 0.17–0.19 m high. (N. M. G. 6661). [824]

CAMELS

*233 433 171

Camels are very important domestic animals in all Tuareg groups, and they also play a great part in the subsistence of most Arab pastoralists of the Northern Sahara. The common Arab camel breed, which is known to the Tuareg as *marroki*, is also found in Northern Tuareg country – particularly among the *Kel Ajjer*. It is heavily built and is extremely well fitted for transportation. It is a very strong breed in spite of its relatively low stature, and it has large feet which is considered an eminent quality for pack camels. This *marroki* camel has a thick cover of wool on the hump and on the forepart of the body, while Tuareg camels, which are of higher stature and more elegantly built, in general have little or no wool, but only a short coat of hair much like that of cows and horses. Tuareg camels may have long hairs around the hump but true Tuareg camels have no proper coat of wool. Though the *marroki* breed is excellent for transportation and is considered a better milch-animal than the southern Tuareg breed, the Tuareg generally prefer their own elegantly built camels, and they look down upon the heavily built camels of the north. However, as mentioned, there are some *marroki*

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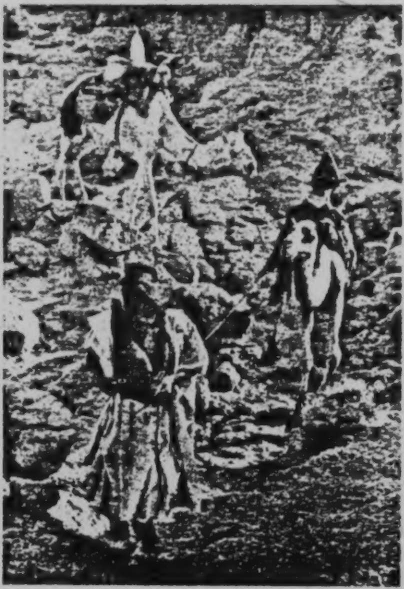

Fig. 33. Tuareg with riding camels. Ahaggar, the *Ağuh-en-tehlé* tribe.

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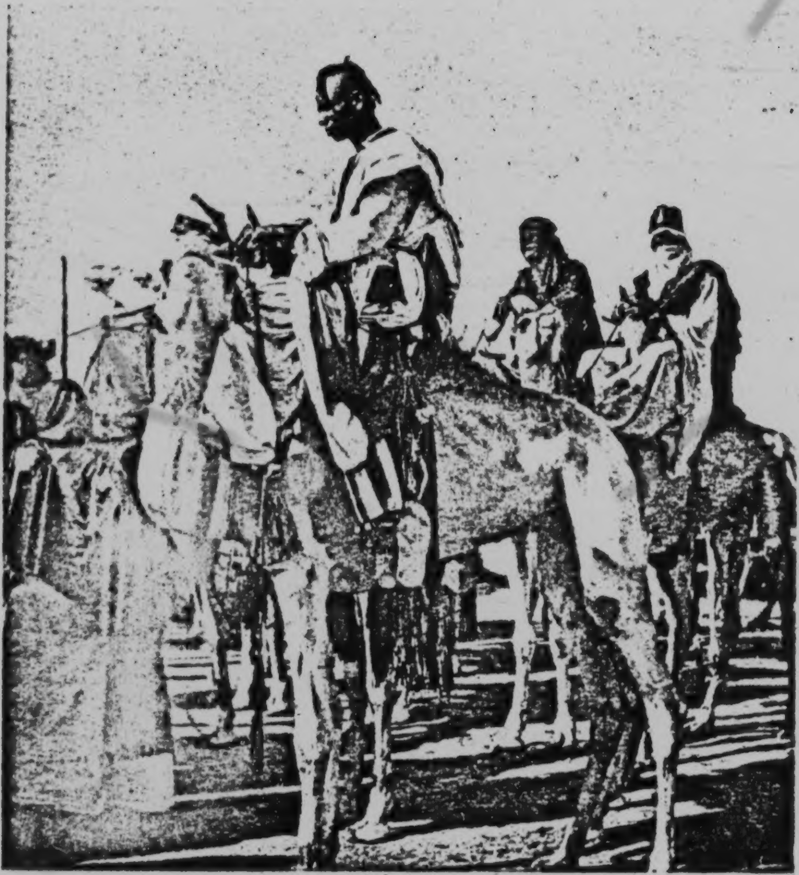

Fig. 34. Tuareg camel riders. The young man seen in the front has not yet adopted the veil. Ayr, Agadez.

camels among the Northern Tuareg, as there are cross-breeds between camels of this type and Tuareg 233*
camels. There are also to-day some Tuareg camels among Arab pastoralists of the Sahara, but I was [17]
told among *Ulad Ba Ḥammu* Arabs that originally all their camels were of the *marroki* type, while
camels of the southern Tuareg breed were introduced among them more recently. I have not been [14]
able to prove or to refute Cauvet's theory that northern and southern camel-breeds differ in dentition

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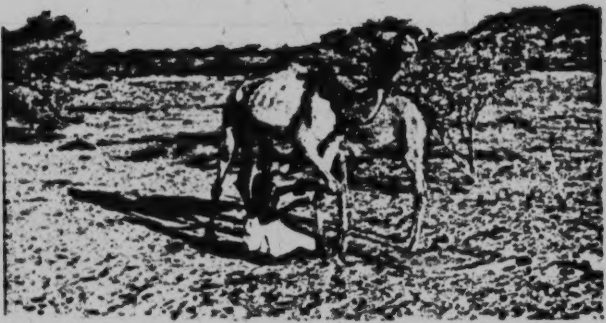

Fig. 35. A young camel (about 14 months old) sucks its mother before milking. The Tuareg boy bends up the right foreleg of the she-camel and ties it in this bent position to the left foreleg – a method known as *ésemmetil*; it is applied to she-camels that are restless during milking. The she-camel has the colour name *tézerift*, its big calf that of *atlar*. Ayr, the *I.sezzureg* tribe.

*233 [114] (cf. Cauvet 1925–26, I, p. 15, 76 ff.). I have inquired about this, and the Tuareg seem to hold that all camels have an identical number of teeth.

She-camels should ideally be reserved for breeding which is a very slow process. A severe loss of goats during a drought can be restored quickly once rainfalls start again, but this is not so with a loss of camels. She-camels are not generally mated until they are about three years old, and their gestation period is about one year. In addition, she-camels get only one calf which has a long period of sucking so that a she-camel is frequently not mated until one year after the birth of a calf. In other words:— [435] One she-camel has only one calf every two years. For this reason, and because a grown camel has about the same value as 25–30 goats, the Tuareg pay much more attention to camel-breeding than to the breeding of goats and sheep.

Most she-camels are mated during the cold season in Ahaggar, while the proper season of mating in Ayr is *akasa* with the beginning of *rarat*, though some she-camels are also mated in the spring period known as *tabsit*. As the gestation period is about one year most camel calves are born during the cold season in the north, in the rainy season when annual plants are well developed in the south. The rutting male camels roam freely in search of she-camels on heat, and a Tuareg may own several she-camels and not even possess a bull-camel for breeding. Both in Ahaggar and in Ayr there are Tuareg who try to keep their very excellent bull-camels away from herds other than their own, but this is considered very bad conduct. In fact, there are Tuareg who do not know with which bull-camels their she-camels mate though the act of mating is normally seen and heard by somebody. Mating is also very frequently arranged by the Tuareg who then assist the bull-camel in introducing its penis into the she-camel's vagina. The act of mating may be connected with some difficulty for the bull-camel because the she-camel has to lie down on the ground during copulation.

A she-camel is well looked after during the period it is expected to have a calf. She stands upright while bearing the calf, and the umbilical cord breaks when the calf falls to the ground. The birth of a calf is not always seen by the owners but they will generally be present at least a few hours after birth.

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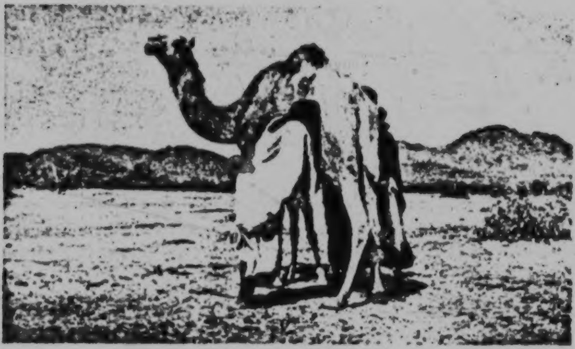

Fig. 36. Two Ayr Tuareg milking a she-camel with the colour name *tawinak*. Ayr, the *Imezzureg* tribe.

They draw out the placenta (in Ayr known as *t'imidin*) by the attachment of a heavy stone to the mem- 233*
brane (*abayor*). It is also common a few hours after birth to draw a little milk from the mother camel
and pour this milk into the calf's mouth in order that the new-born animal may be able to stand up-
right and suck its mother quickly. When this has been done it is normal to bleed the mother-camel.
Some milk drawn on the day a she-camel has borne a calf is frequently consumed by the Tuareg (cf. [272]
éderes, p. 221), but with this exception the new-born calf is allowed to drink all its mother's milk for
the first days after birth. The period during which the calf sucks freely varies. It depends on the yield
of the mother-camel and is also determined by the amount of milk available to the owners from other
animals. Milking may exceptionally start already four or five days after birth, but this is not normal. [234]
The calf is frequently allowed all milk for a fortnight, or even for a whole month. In Ahaggar when
pastures are very dry it is quite normal not to milk a mother-camel at all for a still longer period.

The entire suckling period, that is the period in which the calf is allowed to drink part of its mother's 233*
milk, including the short period when it sucks freely, also varies. But here there is one main rule: a 234
calf is allowed to suck as long as its mother-camel is milked, for she-camels, like cows, do not generally
yield milk unless they have their calves close to them. It is normal to mate a she-camel about one year
after the birth of a calf. She will then yield milk for about six months after mating, so that the total
suckling period is about 18 months, at the end of which period the calf will be allowed very little milk.
If a she-camel is not mated so soon it may yield milk for a longer period, and the suckling period may
even be up to about two years when the calf is a grown animal almost as big as its mother.

There are various methods to secure milking in case a camel has lost its calf. The dead calf may 234
be substituted by another calf, but the dummy-calf is also used with she-camels. This device is known
as *ahayoy* (Ahaggar), or *azeyuz* (Ayr). Both in Ahaggar and in Ayr it is claimed that some she-camels
can be milked without their calves if their udder is patted in a particular way with the hands – which
treatment is known to the Ayr Tuareg by the name *ewlewl*. The method of blowing into the vagina
described above for cows (p. 51) is never employed with she-camels. But there is another method for

[text continues on p. 59]

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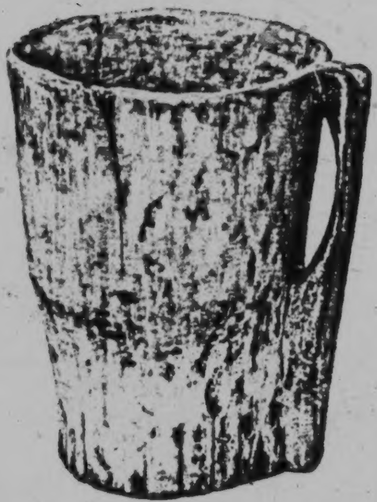

Fig. 37. Wooden milk-bowl (*akabar*) of the type used in Ayr not only for she-camels but also for cows, sheep, and goats. It is carved out of wood of the *turza* tree (*turha* in Ahaggar) (*Calotropis procera*) by a blacksmith. Ayr, the *Imezzureg* tribe. Dimension: 0.285 m high. (N.M. G. 6662).

[237]

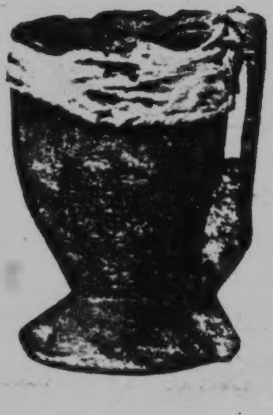

Fig. 38. Wooden milk-bowl (*akabar*) of the type used for she-camels in Ahaggar. It was introduced to Ahaggar from the south where it was made by an Ayr blacksmith from wood of the *turha* tree (*Calotropis procera*). The cracked brim is mended with a piece of raw camel hide. Ahaggar, the *Aguh-en-tehlé* tribe. Dimension: 0.240 m high. (N.M. G. 5822).

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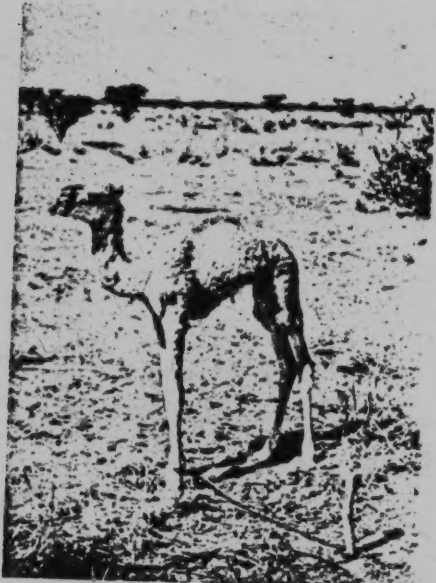

Fig. 39. A very young camel calf tethered in the camp by means of the *témdit* rope depicted below (Fig. 40). Tamesna, Ahaggar Tuareg of the *Iregnaten* tribe.

she-camels which are difficult to milk because they will not allow the calf to suck. The method has been described to me by Tuareg of Ayr. It is named *arazak* and is as follows:— Fresh camel-dung is put into the nostrils of the mother-camel, and its nose is thereupon pierced at three places with an awl a hole being made in each nostril and one hole between them. A cord of dum palm leaf is thereupon drawn through these three holes so that the nostrils are firmly closed, and the animal can consequently breathe only through the mouth. It is said that a she-camel which has carried this bandage for one day will be fond of its calf and will allow it to suck so that milking can be done. 234 [412]

Milking of she-camels is usually done twice a day, early in the morning and very late in the evening. In Ayr certain Tuareg milk their she-camels several times during the day, as the animals generally graze close to the camp and frequently come to the tents to see their calves. Milking between the two proper milking times may also be done with other domestic animals in Ayr if milk is needed for some purpose or other during the day, but it is practised particularly with she-camels, as milk gathers in the udder of these animals very quickly after milking.

Milking of she-camels is done by two men standing at the sides of the she-camel and leaning their heads against the animal (Fig. 36). One of the men holds the large wooden milk-bowl *akabar* (Figs. 37-38) [462] [415]

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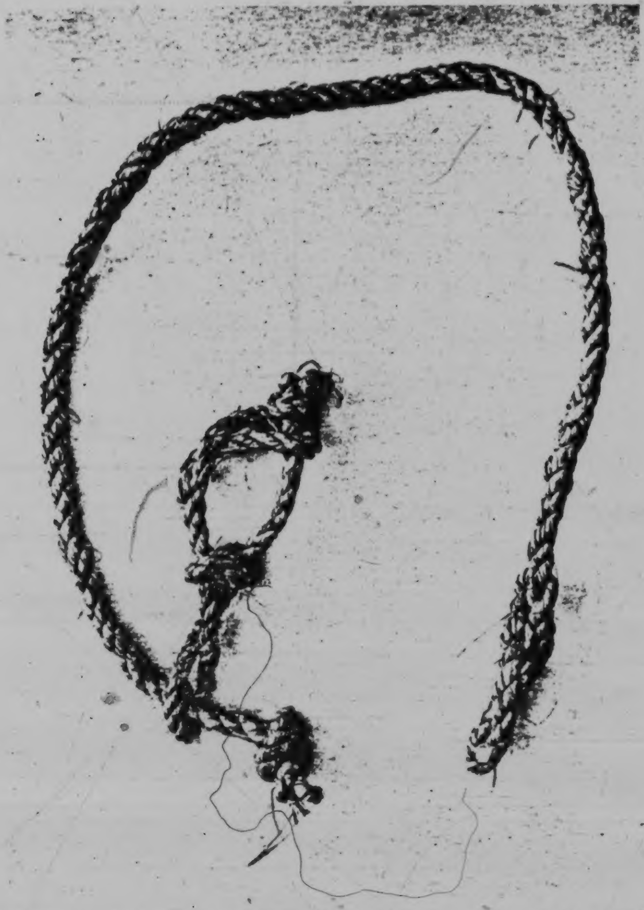

Fig. 40. The *témdit* rope for tethering small camel calves. The rope is plaited from leaves of the dum palm *tagayt* (*Hyphaene thebaica*) and falls into two parts: The short rope to be noosed around the calf's one foreleg and known as *teserrefut* is fastened to the long rope (*témdit*) which has a loop for the tethering peg. The whole system is known as *témdit*. Ayr, the *Imezzureg* tribe. Dimension: ca. 109 m long. (N. M. G. 6660).

37–38) and milks only with one hand, but the milk-bowl may also be held by a woman or a boy so that both milkers have two hands free. If men are absent from the camp, milking may be done by women though properly this is the task of grown men. Certain she-camels are very difficult to milk so that milking should be done as quickly as possible. If a she-camel is very restless and therefore difficult to milk it is customary to bend up its right foreleg and attach it in this bent position to its left foreleg before milking is done. This method is known to the Ayr Tuareg by the term *ésemmetil* (cf. Fig. 35). 234 462

The Tuareg have various devices to prevent camel calves from drinking more than their proper share of milk. In Ayr and also among the Ahaggar Tuareg of the Tamesna region it is common to keep the young calves tethered by means of a particular cord (*témdit*) fastened to the calf's forelegs (Fig. 39–40). The calf is not allowed to follow its mother during grazing, and in the night when all she-camels rest in the camp they are kept lying on the ground so that the calves cannot suck them. When young calves are tethered in the camp they are fed on fresh annual plants collected for them by the Tuareg. When calves grow older and plant food constitutes their most important nourishment, 233* 824

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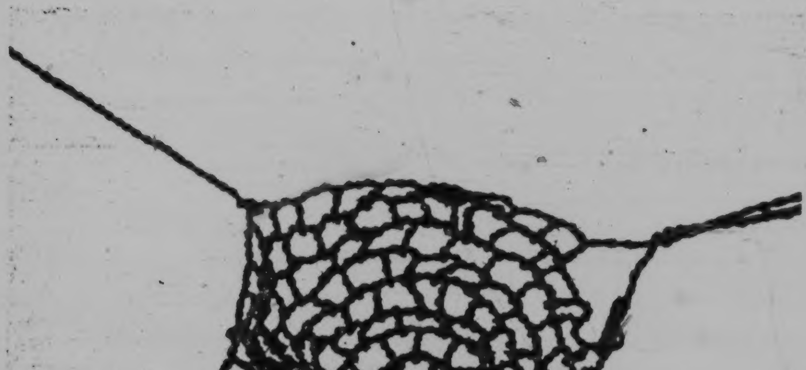

Fig. 41. Plaited pouch (*abeğu*) to prevent the sucking of camel calves. It is made of goat's hair, and it has three cords for attachment to the hind part of the she-camel so that the pouch covers the udder. Ahaggar, the *Aguh-en-tehlé* tribe. Dimension of the three cords: 1.19, 1.05, and 0.97 m. (N.M. G. 5198).

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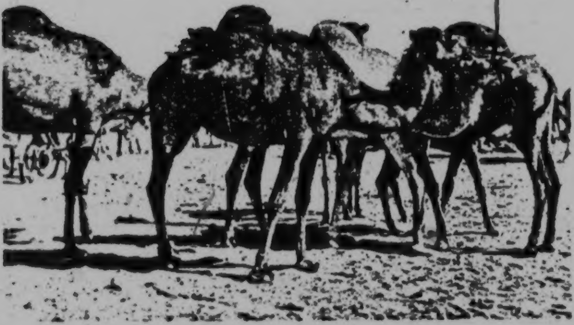

[234] Fig. 42. She-camel provided with the plaited pouch (*abegu*) which covers its udder. The pouch is attached as follows:— A cord is tied around the body in front of the animal's hump while another cord runs along the back at both sides of the hump to pass under the tail. The three cords which form part of the pouch are tied to the tail cord in front of the hind thighs and at the tail. To milk a she-camel carrying a pouch around its udder the hind pouch-cord fastened at the animal's tail is untied. Tasilé-n-Ajjer.

*233 they are hobbled by means of a cord (*téffart*) attached around their forelegs (p. 72, Fig. 45b–e) and [284] are kept away from the mother animals during grazing in day-time. In Ahaggar as well as elsewhere in Northern Tuareg country suckling of calves are normally regulated by another method, namely a plaited pouch (*abegu*) which covers the udder of the mother camel, and the calf can thus be allowed to graze freely together with its mother (Fig. 41–42). This device is known to the *Kel Ferwan* Tuareg of Ayr as *ébeyembey*, but though they know it by name they do not use it. They say, however, that it is in use among the *Kel Ewey* of the Ayr Massif.

The plaited pouch just described also serves as a means of weaning half-grown calves, but there are other weaning methods, namely the following:— (1) *ikembar*, that is cuttings on the bridge of the nose as described above for cow calves (p. 51). In addition to these cuttings, the scars of which form small bumps, it is common to cut the calf also under the chin, the visible result of such a cut being a hanging patch of skin. This method is known both among the Northern Tuareg and in Ayr, and it is, I believe, nowadays carried out mainly for aesthetic reasons as the bumps and the hanging patch of skin adds, in Tuareg opinion, to the beauty of riding camels (Fig. 43). In fact, the cut made under the chin does not seem to hurt a sucking calf, and this cut is not made on cow calves (cf. Fig. 30). (2) A method [114] which is described by Cauvet from the oasis of In Salah may perhaps also be known to the Northern Tuareg though I have not recorded it. It consists of a thorn put into a patch of skin cut loose on the

bridge of the nose of a calf, so that it hurts its mother when it tries to suck (Cauvet 1925, I, p. 359). – 233*
(3) *akimbab*, that is a plaited muzzle which allows the calf to graze, but prevents it from sucking. I
have been told both in Ahaggar and Ayr that such muzzles are used for camel calves, but apparently
they do not constitute a normal weaning method. – (4) *asedres* or *ameru* are said to be synonymous
terms for the weaning method generally adopted among the *Kel Ferwan* Tuareg of Ayr. The method
is as follows:— The upper lip of the calf is pierced on both sides of the harelip so characteristic of all
camels. A piece of thin root of the *afagag* acacia (*Acacia Raddiana*) is drawn through these holes so [224]
that the ends of the root protude at both sides, and a knot is made at both ends that the root will
not fall out. These knots hurt the udder of a she-camel when the calf starts to suck, but this is not
the real idea of the device. For the root-piece keeps the pierced holes open and the calf is therefore
unable to suck at all.

A she-camel may yield about ten litres of milk at the beginning of its lactation period, but at the 234
end of this period it does not yield more than two or three litres even with good grazing. The yield is
always dependent on grazing conditions. Thus during my stay in Ahnet and Ahaggar 1954–55, a
Tuareg who owned about twenty she-camels acquired only two litres of milk a day in all from these
animals. But conditions of camel-breeding are much better in Ayr and in the southern plains where [433]
she-camels are tolerably good milk-yielders most of the year, and camel's milk is therefore very im-
portant to some pastoralists of these regions. Camel's milk is drunk and not generally used for food [272]
in other ways. It is much esteemed by all Tuareg, who claim that it possesses a particular power and
gives strength. It is never stored in the shape of butter or cheese. The Tuareg of Ahaggar and Ayr [262]
never eat camel's butter which they consider possesses a poor taste, and, besides, it is very difficult
to churn. They make butter of camel's milk only when butter of milk from other domestic animals is [302]
lacking for the greasing of the hair. Both in Ahaggar and in Ayr butter is then churned by the men
in a rather peculiar way:— A skin bag containing an amount of camel's milk is attached to the riding [415]
saddle of a camel which is then ridden at very fast speed for some time. But even with this method,
it is said, camel's milk gives very little butter, and it is also definitely stated that the milk cannot be
used for cheese-making. These Tuareg statements seem to be confirmed by analyses of veterinaries, [114]
who claim camel's milk to contain very little casein, and it has been proved difficult to separate
butter from camel's milk (cf. Cauvet 1925, I, p. 707 ff.).

She-camels can mate and yield milk until an age of about 25, and their average length of life is 233*
estimated by the Tuareg at about 30 years. But pastoral Tuareg do not generally keep their camels
until they die a natural death. In Ayr I was told that she-camels more than twenty years old should
be sold or killed. Most Tuareg sell their old camels in the oases of the Central or Northern Sahara [432]
where a large population of sedentary farmers is constantly yearning for meat. Very few camels are [366]
killed by the butchers of Agadez, where meat from oxen, sheep, and goats is always available and [262]
fairly cheap, but a great many old camels are slaughtered at the market places of the oases further north.

Pastoral Tuareg of Ayr very rarely kill their own camels to eat them. They will slaughter a camel 262
which suffers from some severe disease as all animals dying by accident or from disease are unlawful
to eat. However, there are also some Ayr Tuareg who will never eat camel's meat. They say that they [261]
would feel very sick at heart were they to do so, and some Tuareg even say that they would vomit

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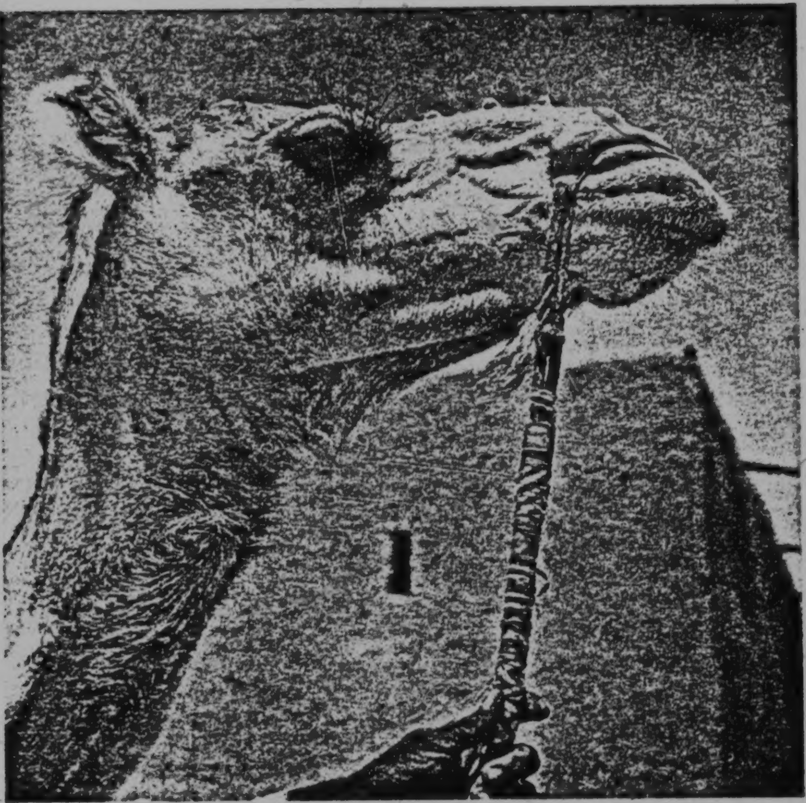

Fig. 43. Riding camel with *ikembar*, that is scars from cuts on the bridge of the nose and a hanging patch of skin under the chin. An ornamented leather rein (*tarant*, or *trézem*) is fastened to the copper ring (*tiĝemt*, or *tigemt*) of the right nostril. The camel's colour name is *aberog*. It was my own riding camel – a precious gift from Professor Daryll Forde of the University College London. – Ayr.

262 if they had to eat the meat of camels. I have also been told that all members of certain tribes (e.g.,
261 the *Ikezkezen*) will refuse to eat any food served in a receptacle which has once contained camel's meat.

262 I have never heard about Tuareg in the two northern groups who would not eat camel's meat, though most Tuareg in the north consider meat of sheep and goats superior to camel's meat. People of all tribes in Ahaggar and Tasilé-n-Ajjer will eat it, and there seems to be a certain prestige attached

to the killing of a camel for wedding guests. Otherwise the Northern Tuareg like those of Ayr only 262
kill sick animals for food.

There are certain practical reasons why camels should not normally be killed for food among the
Tuareg. Even very old camels fetch high prices at markets of the northern oases (Tamanraset, Tidikelt), [435]
and the Tuareg prefer to get the money instead of eating their old camels. This is easily understood
when we consider the fact that one camel contains so much meat that it cannot be eaten quickly by [252]
the members of a household, and camel's meat is rather tough and must be boiled for several hours
to be eatable. Besides, camel's meat is not very well suited to be preserved for eating at a later date [251]
on journeys. However, it can be dried and when sick camels are killed part of their meat is often prepared
in this way.

A camel is killed in a very particular way quite different from the method of slaughtering other 233*
domestic animals and game. It is killed as follows:— Cords are attached very firmly around the legs of the animal which is kept to the ground by several men who sit on its back and draw its head backwards. The artery is thereupon opened at the lower part of the neck close to the chest, and the knife is thrust into the animal at this place, but not so deeply as to touch the heart or the entrails. This stab is quite sufficient to kill the camel, but some people also cut its throat close to the head in the way other domestic animals are killed. Very peculiar also is the way camels are skinned. While other animals are skinned in such a way that the hide can be removed as entire as possible (cf. Fig. 173), the carcass of a camel is cut up before skinning. The four legs with their thighs are cut loose close to the carcass, which is thereupon cut into several parts by means of a large chopping-knife or an axe (cf. Fig. 44). The hide is thus removed from the carcass after partitioning; but it is difficult to remove the hide as
it sticks firmly to the meat, and only part of it is taken off for later use. In Ayr the Tuareg do not 000

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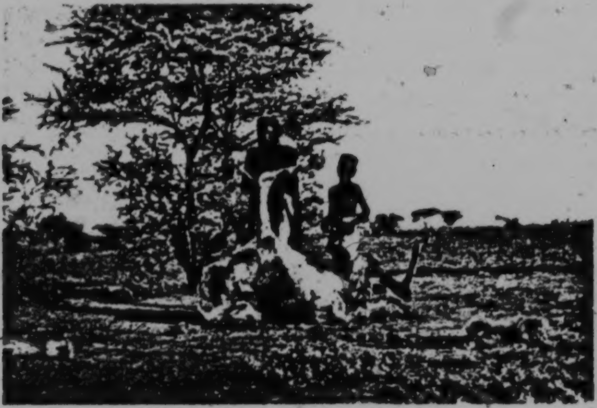

Fig. 44. Skinning and partitioning of a young camel. Ayr, *Irawdira*.

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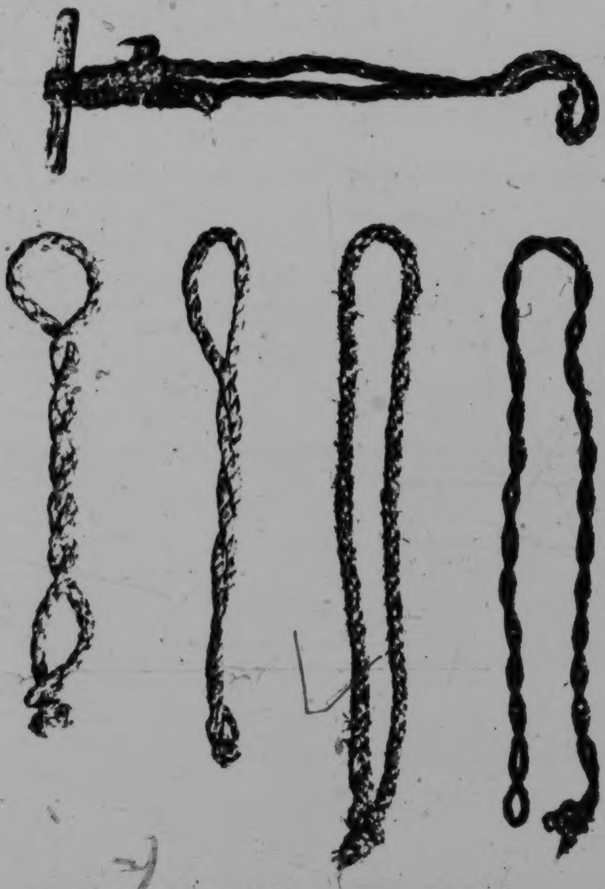

Fig. 45a–e. Hobble-ropes for camels.

a. The *aseyan* rope to be tied around the foreleg of a camel to keep it lying down. This rope is made of goat's hair. Ahaggar, the *Aǧuh-en-tehlé* tribe. Dimension of the stick 0.128 m (N.M. G. 5195).
b. Hobble-rope (*téffart*) made of dum palm leaves. Ayr, *Kel Ferwan* Tuareg. Dimension: 0.43 m. (doubled). (N.M. G. 6609).
c. Hobble-rope (*téffart*) made of raw ox-hide. Ahaggar, the *Aǧuh-en-tehlé* tribe. Dimension: 1.03 m. (N.M. G. 5196).
d. Hobble-rope (*téffart*) newly-made of date palm bast. Ahaggar, Tamanṛaset. Dimension: 0.60 m. (doubled). (N. M. G. 5197).
e. Hobble-rope (*téffart*) made of goat's hair. Ahaggar, the *Aǧuh-en-tehlé* tribe. Dimension: 1.16 m. (N.M. G. 5194).

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Fig. 46. A resting she-camel with the colour name *tawinak*. The colour term of the young she-camel standing in the back-ground is *ténilt*. Ayr, the *Imezzureg* tribe.

In Ayr the Tuareg do not use camel's hide in their crafts, but give it to the blacksmiths who use it for lashing, or to people who manufacture beds from ribs of palm leaves (cf. Fig. 257). The Northern Tuareg use camel-skin for the manufacture of a few household implements and also use it for lashing (cf. p. 84, 110, 222, 270 f. & Figs. 70, 86, 132a–b, 161a–d, 162, 213). But even in Ahaggar and Tasilé-n-Ajjer the skin of camels is little used compared with the skin of goats, sheep, and barbary sheep. 237 564 352 824

When employed in craft, camel's hide is normally used raw and unprepared after soaking in water, but the Ahaggar Tuareg say that for certain purposes the hide is treated with salt. In literature there are many statements about the tanning of camel's hide. Thus it is stated by Cauvet that the hide is tanned with plant material in Algeria, and Cauvet also quotes Duveyrier's statement that the Northern Tuareg tan camel's hide to use it for tents and various other implements (Cauvet 1925–26, I, p. 714 ff.). I very much doubt the correctness of this, as all Tuareg asked about it have stated that the hide of camels is not fitted for proper tanning. Camel's hide is therefore of very limited use to the Tuareg, and the same is the case with camel's hair or wool. Tuareg camels in Ayr have very little wool, and among the Northern Tuareg most animals have less wool than Arab camels of the Northern Sahara. The Northern Tuareg pluck a little wool with the hands or cut it off with a knife. It is spun into cords to be used for certain minor objects, notably for the manufacture of the plaited pouch (*abegu*) to prevent the suckling of calves (p. 62, Fig. 41) and for the particular cord (*asegrun*) tied around the forelegs of camels to keep them in a reclining position (p. 72, Fig. 45a). Mixed with goat's hair the wool is also used for a kind of primitive weaving (p. 265 ff., Figs. 209a–b). 281 114 237 283 286

Camels are very important to the Tuareg as pack-animals for the caravan expeditions which will be mentioned in a later chapter when other means of subsistence have been described. 492* 484

In the past camels were also extremely valuable as riding animals on raiding expeditions which 492* 721

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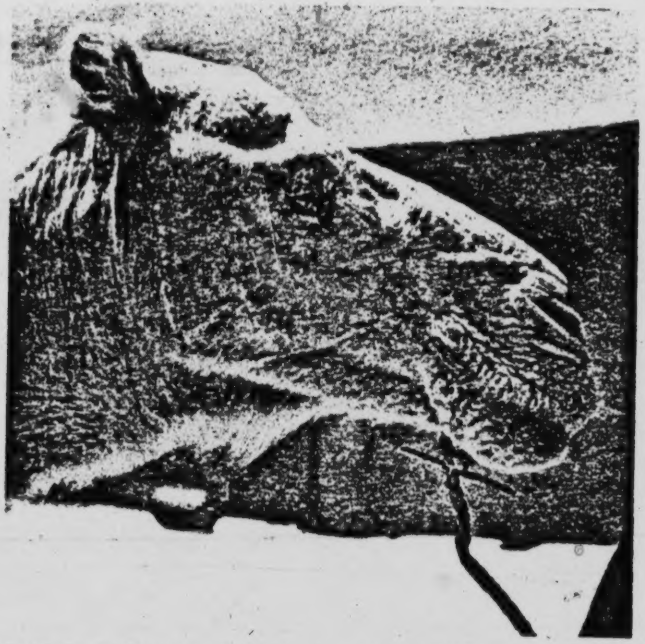

Fig. 47. The *akalu* rope noosed around the lower jaw of a pack-camel and prevented from loosening by the insertion of a small stick. Ayr, *Kel Ferwan* Tuareg.

*492 721 played an important part for all Tuareg. Raiding expeditions were carried out to gain all kinds of booty, but camels were the main objective, and it was difficult to carry off other kinds of domestic animals over long distances. Thus camels were the main cause of raiding and also the means by which 721 raiding expeditions were carried out. In Ahaggar large scale raiding stopped long ago with the advent 175 of the French at the beginning of our century, though it recovered again during the revolt of 1916–17. This was also true of Ayr, but it seems as if raiding in and around this Massif continued still later 685 (cf. Rodd 1926a, p. 187 ff. & Buchanan 1921, p. 209 ff.). Nowadays raiding has ceased everywhere among the Tuareg, but theft of camels has been on the increase in the south. There are many camel thieves among the Ayr Tuareg, for it is very easy to steal grazing camels during the night and to lead them to some distant market and sell them. The Tuareg claim that in pre-European times there were [640] hardly any camel thieves in Ayr as such persons were punished very severely. They say that the theft of camels became normal with the French who have great difficulty in proving the guilt of thieves.

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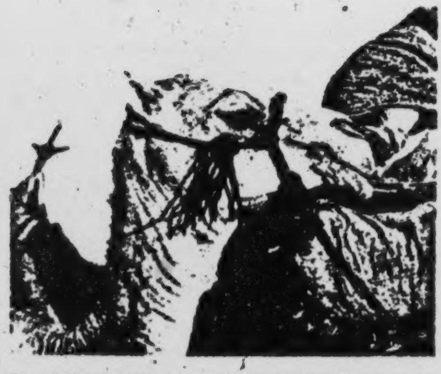

Fig. 48. Young camel with a halter (*amerwar*) made from a rope of goat's hair. Tasilé-n-Ajjer, the *Kel Terurit* tribe.

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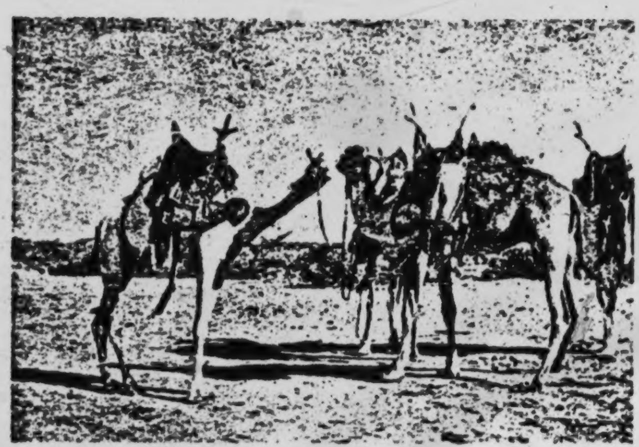

Fig. 49. Riding camels in Ahaggar.

685 648 One of the principal tasks of the Ayr camel patrol consists in hunting down camel thieves to take them to Agadez and prove their guilt. Most Tuareg sympathize with this judicial work of the French but claim that it is too ineffective.

232 *492 [435] The Tuareg still take a very great interest in the breeding of riding camels, and extremely good riding animals are occasionally sold for a price equal to that paid for five or six normal camels. When a calf is born they at once recognize whether it will be well fitted for riding or not, for there are certain basic characteristics of riding camels. Ideally they should have a relatively short body, be deep-chested, and of high stature with small feet and slender limbs. For pack-camels they prefer heavy and strong animals with very large feet. Both for riding and for transportation they prefer bulls or castrated animals. Geldings are calmer than bull-camels which are often very fierce and dangerous when she-camels are on heat. Rutting bull-camels may even attack people, and they will fight each other – sometimes with the result that one of them is bitten to death. But there is another reason for castration. For bull-camels which have not been allowed to mate freely with she-camels are generally not very difficult to handle. Castration makes bull-camels stronger and more enduring as they more easily grow fat and get larger humps than non-castrated animals. Castration is never carried out until the bull-camel is fully grown, and both in Ahaggar and in Ayr castration is performed comparatively late when the animals are about five or six years old, or later. Many bull-camels are castrated at an age of ten or eleven years.

*233 *492 She-camels are not generally used for riding and transportation, but are reserved for breeding. But some Tuareg may use their she-camels even for extensive trading expeditions, and there are Tuareg who prefer to ride she-camels because of their smoother walk. If a Tuareg has a very good she-camel as a riding animal he may even desire to prevent it from mating by the insertion of a very small pebble into the uterus of the she-camel which will then not be able to mate until the pebble is removed. However,

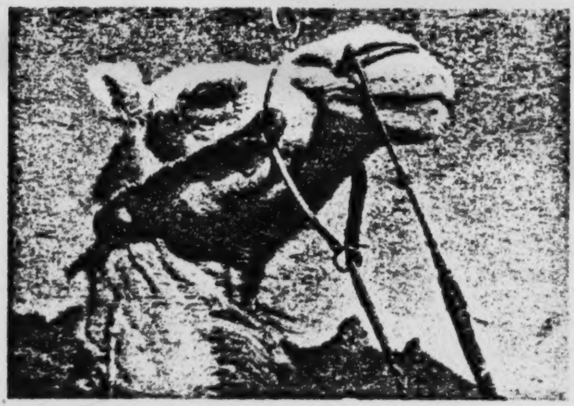

Fig. 50. The headgear known as *akeskabbu*. The upper iron shackle resting upon the bridge of the nose is called *akeskabbu*, the lower shackle to be tightened against the chin is known as *amadel*. The two shackles are connected with a rein of ornamented leather, the other end of which is fastened to the nostril ring (*tifemt*). Ahaggar, the *Iklan-en-tawsit* tribe.

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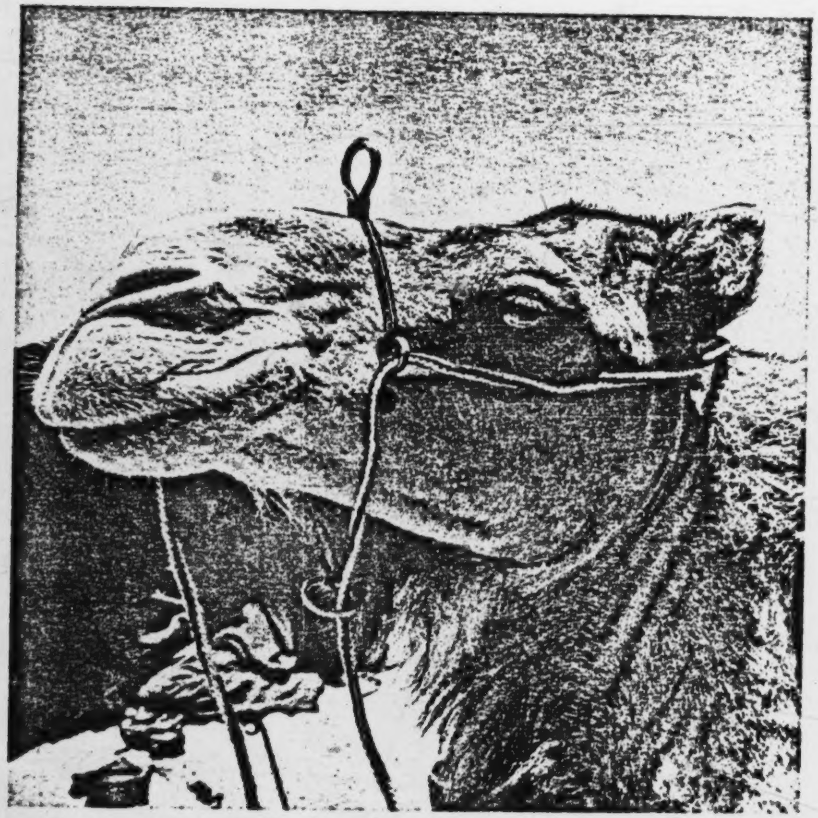

Fig. 51. The *akeskabbu* shackles connected with a rein plaited of black and white goat's hair. Ahaggar, the *Aguh-en-tehlé* tribe. The whole piece is now in the collection of the Århus Museum (F.M. 76). Dimension of the upper shackle: 0.16 m high.

very few Tuareg use this method as they are on the whole most interested in the increase of their camel-herds. According to Duveyrier it was even common practice among the Northern Tuareg, who in the past had comparatively few camels, to destroy the fetus of she-camels which could then be used as riding animals on raids (Duveyrier 1864, p. 354). [illegible] have never been told about that among the Tuareg, and I do not believe that this custom is practised among modern Tuareg who have more camels. It

*233 *492 should be remembered that she-camels possess less endurance than bull-camels and geldings on very long journeys.

*233 She-camels and the few bull-camels which are reserved for breeding graze free and unhobbled; pack and riding animals are hobbled with a short rope between their forelegs during grazing. Both in Ayr and among the Northern Tuareg this hobble-rope is known as *téllart* (Fig. 45b–e). In Ayr it is generally [137] rather short because pasture is rich in the valleys where camels are also difficult to find because of the dense vegetation and because the animals frequently leave no trace. In the two groups of Northern Tuareg, vegetation is on the whole more scattered and camels have to wander more freely to find suitable fodder. The Northern Tuareg therefore in general use a somewhat longer hobble-rope, and they find their animals again without much difficulty because of the open country and because the camels leave foot-prints which differ from one animal to the other. When the camels are out of sight they are easily traced by the Tuareg who know their foot-prints. [283] The Ayr Tuareg make their hobble-ropes from dum palm leaves twisted together, while Northern Tuareg use bast of the date palm trees, which latter material is considered the better for hobble-ropes. If hobbled camels are left to themselves for longer periods the Northern Tuareg also use ropes made of goat's hair or ox hide as such ropes do not so easily break (cf. Fig. 45c, e).

[171] Arab pastoralists of the Northern Sahara do not always let their camels graze during night but frequently keep them lying in front of the tent after darkness; the animals are then tied around one of their forelegs by means of a short rope provided with a small stick. The same device (*asaɣun*) is also known to the Northern Tuareg (p. 67, Fig. 45a), but it is unknown to the Ayr Tuareg who use for this purpose a short rope (*aɣenfud*) without a stick and made from twisted dum palm leaves. The Tuareg may keep camels in the camp during night and then tie one of their forelegs with the ropes mentioned. This is done with she-camels which rest close to their calves at night time, and in Ayr also with most camels during the short period of the year (*akasa* and the beginning of *ɣarat*) when dew falls heavily upon annual pasture, for camels may contract stomach diseases from eating wet annual plants. In Ahaggar I have noted that camels are attached in the way mentioned and kept in camp during the night in order that they might not eat noxious plants growing close to the tents (cf. p. 124). However, camels normally graze during the night and do not sleep much. On the very long trading expeditions they eat almost exclusively through a few hours of the night. When a camel sleeps it stretches out its long neck in a slightly curved position and its head rests upon the chin (cf. Fig. 46). It sleeps very lightly, and the Ahaggar Tuareg say that a boy who is able to creep under the neck of a sleeping camel and not awake it will never loose his way in the desert.

*492 Pack-camels of a Tuareg caravan walk one behind the other in a long line. Every pack-camel is provided with a rope noosed around its lower jaw, the loop being prevented from loosening by the [283] insertion of a small stick (Fig. 47). This rope is known as *akala* to the Ahaggar Tuareg, who use ropes made from twisted pieces of date palm bast, while the Ayr Tuareg make similar ropes from dum palm leaves. The loose end of the *akala* rope is attached to the pack-camel walking in front, fastened either to its luggage or, more frequently, to its neck around which camels of a caravan carry their hobble-ropes.

*233 *492 True halters made from goat's hair or from palm material are used mainly for young untrained

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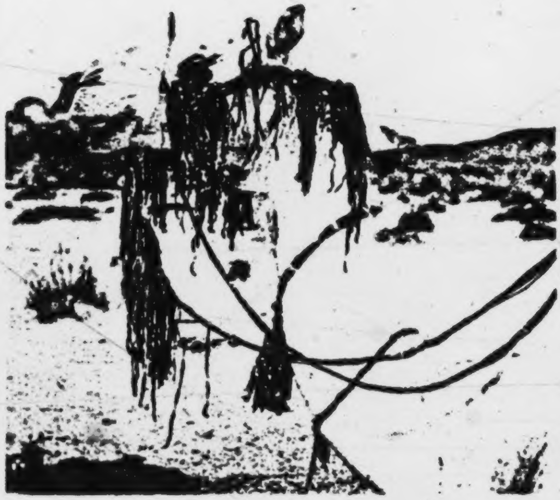

Fig. 52. The *akeskabbu* shakles connected with a leather rein richly decorated with fringes of the same material. This headgear is now in the National Museum (N.M. G. 5192). Hanging around the camel's neck is also a neck collar (*tahawt*) with a brass bell (*anayna*) which is also now in the National Museum (N.M. G. 5191) (cf. Fig. 74b). Below the brass bell is an amulet case fixed to a piece of goat's hair. Ahaggar, the *Aġuh-en-tehlé* tribe.

*233 camels and for other animals which are difficult to control (Fig. 48). Such halters are known by the
*492 term *amerar* among the Ayr Tuareg. Certain camels which are difficult to catch even when hobbled during grazing constantly wear a halter provided with a short rope hanging down from the head – a device applied to many fierce bull-camels (Fig. 56).

*492 To break-in young riding camels the Tuareg frequently use a double rein one end of which is tied around the animal's head to serve as a halter while the other end is noosed around the lower jaw according to the method generally used for pack-camels and described above. But for trained riding
[237] camels the nomads normally content themselves with the use of a single rein (generally known as *taġant* in Ahaggar, in Ayr as *trézem*) plaited of goatskin or goat's hair and attached to a copper ring
[564] (*tiġemt* in Ahaggar) inserted in the right nostril of the camel (cf. Fig. 43). This is done by the blacksmiths who also manufacture a very special headgear (*akeskabbu*, or *taryet* in Ahaggar) for riding camels which are difficult to control. The rider when using such a head-gear has a double rein one end of which is attached to a nostril ring (*tiġemt*) while the other end is connected with two iron shackles known as *akeskabbu* (*taryet*) and *amadel*. When the rider pulls the right rein the camel is pulled at the nostril ring, but when he pulls the left rein the two iron shackles are tightened around the bridge of the nose and the lower jaw of the animal. The system is illustrated Figs. 50–52. Black-
[326] smiths also make very elaborate halters of this type to be used mainly as an ornament of riding camels
[531] on festive occasions. In such cases the halter as well as the rein are richly decorated with coloured

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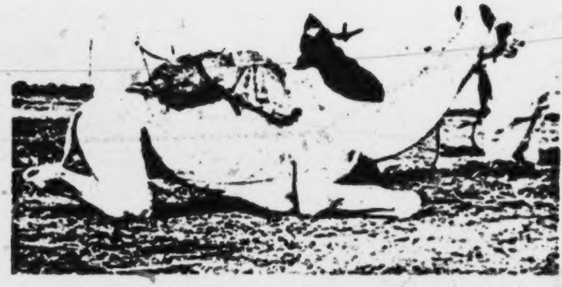

Fig. 53. Pack camel with the saddle consisting of two skin-bags (*imaytalen*) stuffed with hay. Ayr, the *Imezzareg* tribe.
Fig. 54. A skin bag (*amaytal*, pl. *imaytalen*) of the type used for pack-saddle. Ayr, the *Imezzareg* tribe. Dimension: ca. 0.80 m. (N.M. G. 6658).

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leather fringes (cf. Fig. 52). Some very elaborate halters are found in the Musée de l'homme (Nos. 5.66.5; 30.61.228; 95.46.3; D $\frac{34}{1}$ 42; D $\frac{34}{1}$ 25).

*492 Foucauld describes a peculiar method for leading camels, as follows:— A little wooden stick (*aġula*) is stuck into the skin between the chin and the lower jaw of the animal, and the lead is attached to this stick. The method is practised with camels which have no nostril ring and cannot be led by means of a rope attached around their lower jaw (Foucauld 1951–52, I, p. 426). I have seen this peculiar method practised once in Ahaggar.

Pack-camels are rarely used without some type of saddle, but it happens that camels are used for water-transportation from the well to the camp without a saddle. The waterbags are then hung over the animal's back, their cords resting upon a layer of straw or sprays. In Ahaggar, and more so in Ayr, it is also common instead of a proper saddle to use two skin-bags filled with grain, straw, or the like to form cushions. One of these is placed before, the other behind the hump so that the cords of luggage bags can rest upon them (cf. Fig. 53–54). These cushions are known as *imaytalen* (sing. *amaytal*), and they may serve as a pack-saddle even on long journeys, though the Tuareg in general use proper saddles on trading expeditions.

[171] Pack-saddles of the Northern Tuareg correspond to saddles found among the Arabs of the Sahara. The common type is that known to the Arabs as *ḥawiyya* or *ḥiddğe*, and called *élaki* by the Northern
[824] Tuareg. It consists of a wooden frame (*élaki*) generally made from pieces of palm leaf ribs (Fig. 55).
[284] It is made up of two crossbars placed close to each other, each of them being composed of two short and slightly curved pieces of palm leaves' ribs lashed together at the top with raw camel-hide. The

pair of cross-bars is connected with four short sticks of the same material, each being lashed with 492* hide horizontally to the crossbars. This frame is generally manufactured by sedentary agriculturists [563] of Tidikelt, who also make the large cushion (*tihekam*) of date palm bast to which the saddle-frame is attached with cords. On rare occasions the Tuareg also have saddle-frames of wood (*taharekkat*, [824] that is *Tamarix aphylla*) made by the blacksmiths on the same pattern, and they may also use cushions [564] of hay stuffed into a piece of matting. The *élaki*-saddle is used in the following way:— The short looped cords of the loading bags rest upon the wooden frame in front of the camel's hump and on the rear part of the saddle-cushion. A bunch of grass or date palm bast (*aselki*) is placed under the loading cords that they may not gall the back of the camel. In addition to the proper camel-load divided into two halves (e.g., two large bags) there are frequently many smaller objects to be transported, and these are then attached to the wooden saddle-frame. The *élaki*-saddle normally rests loosely upon the camel's back, but it may be fixed to the animal's back by a girth (*ahayif*). It is also occasionally

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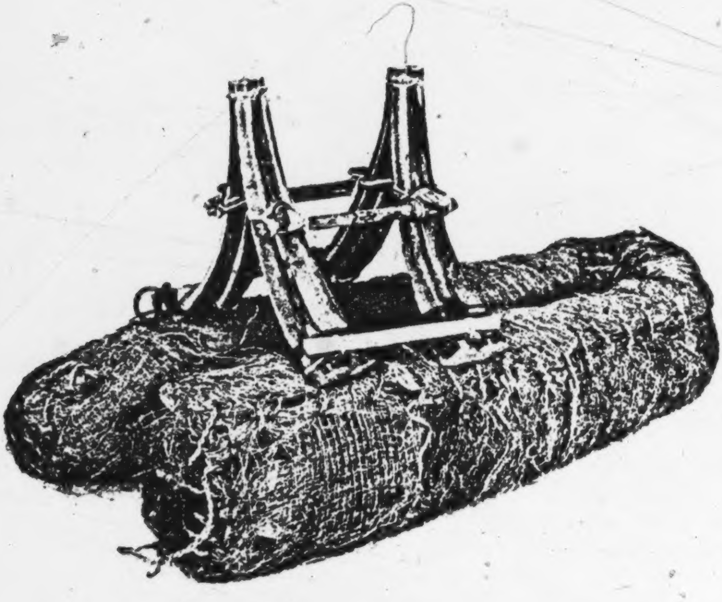

Fig. 55. The *élaki* pack saddle consisting of a saddle frame attached to a U-formed cushion made of date palm bast: The saddle frame made of palm fronds lashed with raw hide. It is called *élaki*, or *erras en eluki*. Ahaggar, Tamanṛaset. Dimension: 0.34 m high. (F.M. 191).
The saddle cushion of date palm bast. It is called *tihekam*. Ahaggar, Tamanṛaset.
Dimension: 1.50 m long. (F.M. 192).

*492 fixed with a rope running under the tail and/or a rope around the camel's chest. The *élaki*-saddle is
[184] unknown to the Ayr Tuareg, but I have seen it in use among Arab traders living at Iferwan of Northern
[171] Ayr. It is by far the most common type of pack-saddle in both groups of Northern Tuareg.

Another type of pack-saddle named *tebeyut* or *tkhawit* corresponds to the *ḥerej* saddle of the Arabs.
It is used occasionally by the Northern Tuareg, but I have only seen it among the *Kel Ajjer*. The
saddle-frame is made from date palm ribs and consists of two cross-bars connected with each other
by two crossed sticks at both sides. One of the cross-bars rests in front of the animal's hump, the
[283] other behind. The frame is lashed together by means of strips of raw camel-hide and is fastened to
two pads of palm bast as can be seen from the photograph Fig. 57. As far as I know this saddle-type,
[563] like the type above-mentioned, is manufactured by palm-growing agriculturists of the oases. This
saddle type seems to be unknown among the Ayr Tuareg.

The proper pack-saddle used among the Ayr Tuareg is known to them as *aruki*. It consists of one
[285] wooden arch lashed to two flat boards (Fig. 58). These two sideboards are attached to two pads made
from hay stuffed into tubular pieces of dum palm matting. The two pads or mat cylinders are fitted
on each side of the camel so that the wooden arch rests in front of the hump. But there is also a rear
pad consisting of a stuffed skin-bag laid over the camel's back behind the hump and attached to the
wooden arch by means of cords. The loading cords bear on this stuffed skin-bag and on the mat-
cylinders in front of the wooden arch. The wooden arch is manufactured by blacksmiths, while the
[564] side pads and rear pad are made by the Tuareg. The saddle is not generally fixed to the camel by
means of girths or cords. The place of origin for this saddle-type seems to be Ayr. It is used also among
the *Kel Geres* Tuareg, and it seems as if related saddle-types occur elsewhere in the south (cf. p. 311).

*492 Transportation bags of various types are used for camel loads, but the very large bags woven from
415 a mixture of goat's hair and camel's wool so typical of northern Arab pastoralists are not in current
use among the *Kel Ahaggar* and the *Kel Ajjer*, and are entirely unknown to the Tuareg of Ayr. The
[563] Northern Tuareg generally use bags made from the skin of barbary sheep, or bags made from date
palm bast by the sedentary agriculturists of Tidikelt (cf. Fig. 59). In Ayr the Tuareg normally use
transportation bags of plaited dum palm leaves.

The ideal load of a camel consists of two bags forming a total weight of up to 200 kgs for a very
strong animal. The two bags, which together form one load, are each provided with two short loading
loops. They are known to the Ahaggar Tuareg as *elrerwet* when bags are woven, as *tadekmert* when
the bags are of skin. The loading is done as follows:— The two bags are lifted up and supported against
the sides of the recumbent pack-camel by two men who put the loops of one bag into those of the
other and insert between them two little sticks, known in the north as *tihdad* (sing. *tehedit*).
To unload the camel all one has to do is to pull out the two small sticks inserted between the loops,
[171] and the two bags fall to the ground. This same system is also used in Ayr, and, I believe, among all
camel-breeders of North Africa. - To secure the load in a fixed position it is very common to surround
its two halves with a rope (*akhamil* in Ahaggar), which is laid over the saddle-frame before loading
and another rope around the luggage and the belly of the pack-camel is also used if considered
necessary.

*492 When camels are taken to the camp from pasture, they are sometimes mounted without a saddle

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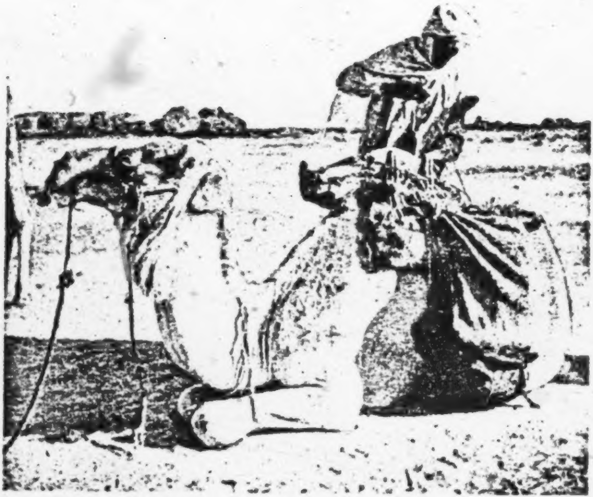

Fig. 56. The loading of a camel bull carrying the *élaki* saddle. This bull was very fierce. It is provided with an *akala* rope around the lower jaw, and a halter (*amerar*) with a short rope hanging down to facilitate capture. The recumbent position of the bull is secured by a rope passing around the neck and a foreleg. Ahaggar, the *Kel Ahnet* tribe.

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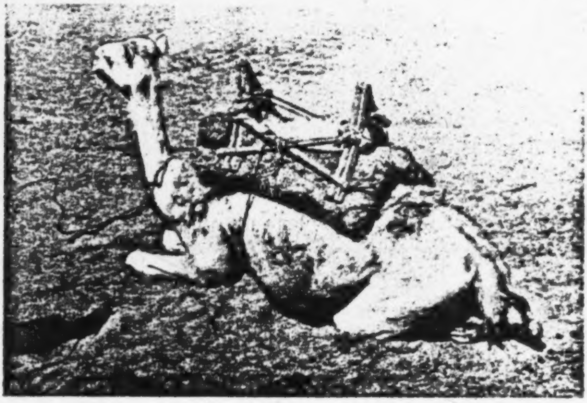

Fig. 57. Camel with a pack-saddle of the *tebeyut* or *tkhawit* type consisting of a frame made of palm fronds attached to two cushions of date palm bast. Tasilé-n-Ajjer, *Kel Ġanet*.

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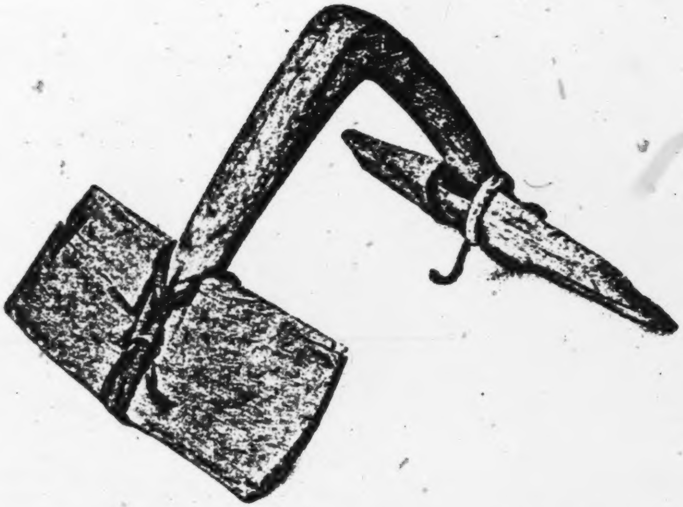

Fig. 58. Wooden saddle frame of the *aruki* type. The curved piece of wood is fastened to two boards with strips of raw hide. The frame is manufactured by an Ayr blacksmith. Bought at Tamanrasset. Dimension: 0.337 m long, 0.275 m high. (N.M. G. 5247).

*492 [171] by men and boys, who sit sideways in front of the hump resting their feet upon the animal's neck, or, more rarely, behind the hump with their feet hanging down, as is the custom of Arab pastoralists of the Northern Sahara. It should be added that on long trading expeditions the Tuareg frequently content themselves with sitting on the top of their loaded pack-camels. But riding in these ways is not very pleasant, and whenever possible the Tuareg use proper riding saddles placed in front of the camel's hump so that the rider sits cross-legged in the saddle with his feet resting upon the lower part of the animal's neck.

Most Tuareg have saddles of the well-known type with a cruciformed pommel. This saddle is known [531] as *térik* which term is used for three distinct sub-types. One is known as *tekokeyt* (Fig. 60); it differs from the type known as *tamzak* mainly therein that the latter is provided with peculiar ornaments and designs (Fig. 61). These two saddles are those normally used by the Tuareg, while the third sub-type known as *bertekes* is extremely rare; it resembles the *tamzak*-saddle, but is provided with many [564] [432] small bells fastened to be back (Fig. 62). Such saddles are hardly ever manufactured by the blacksmiths of Northern Tuareg countries, but are made in Ayr, notably in Agadez, where the Northern Tuareg also buy their riding saddles. Even the Arab pastoralists of the tribes *Chamba* and *Ulad Ba*

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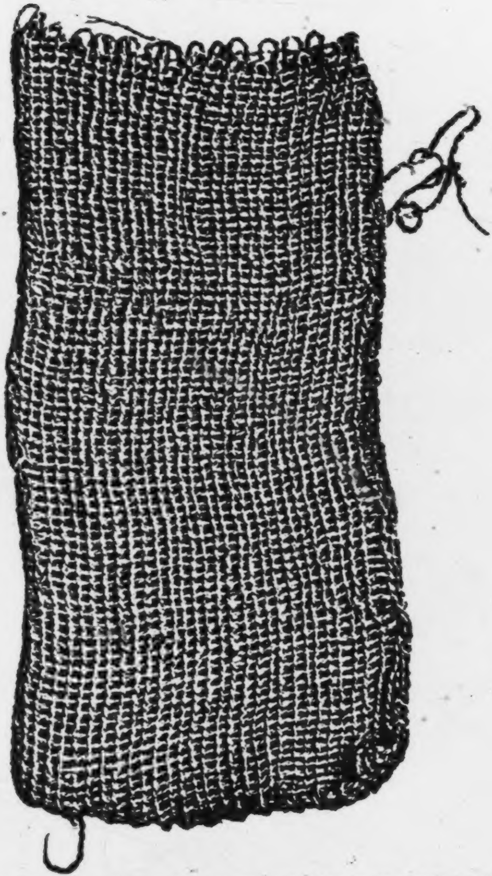

Fig. 59. Transportation bag (*achchebket*) plaited from cords of date palm bast. Made by *Ḥarratin* of Tidikelt, bought at Tamanṛaset. Dimension: 1.18 m long, 0.58 m broad. (N.M. G. 5217).

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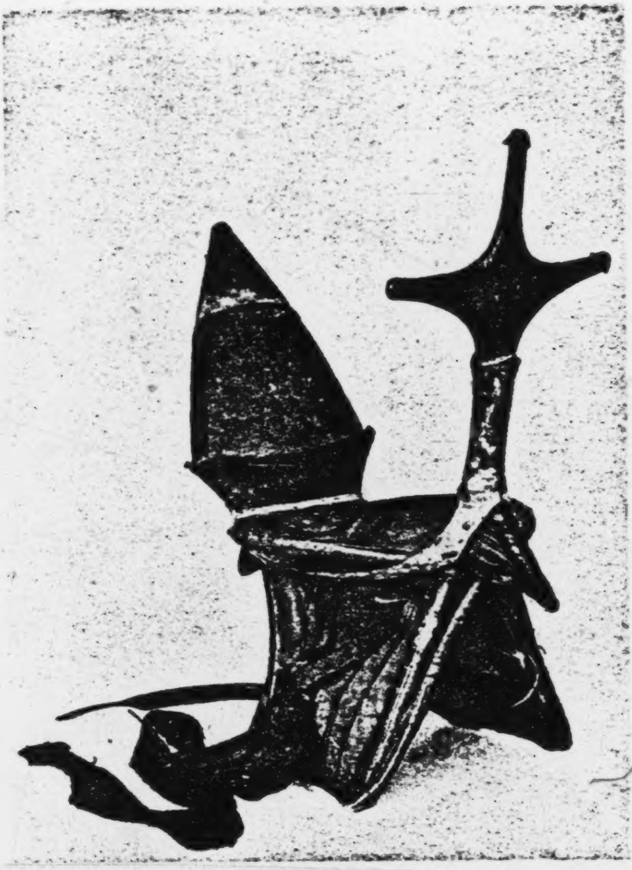

Fig. 60. Riding saddle of *tekokeyt* type (*térik*). Bought in Ahaggar by Olufsen, manufactured in Ayr. Dimension: 0.70 m high, 0.50 m long, 0.35 m broad. (N.M. G. 1.126).

284 237 113 *Ḥammu* obtain their riding saddles from Ayr. All three sub-types of the *térik*-saddle are constructionally identical, being made from pieces of wood lashed together with raw hide and then covered with coloured leather. The structure of this *térik*-saddle is described and depicted in literature (cf. notably Gabus 1949, pl. XII; 1957, p. 176 & Nicolas 1950a, Fig. 48, p. 179).

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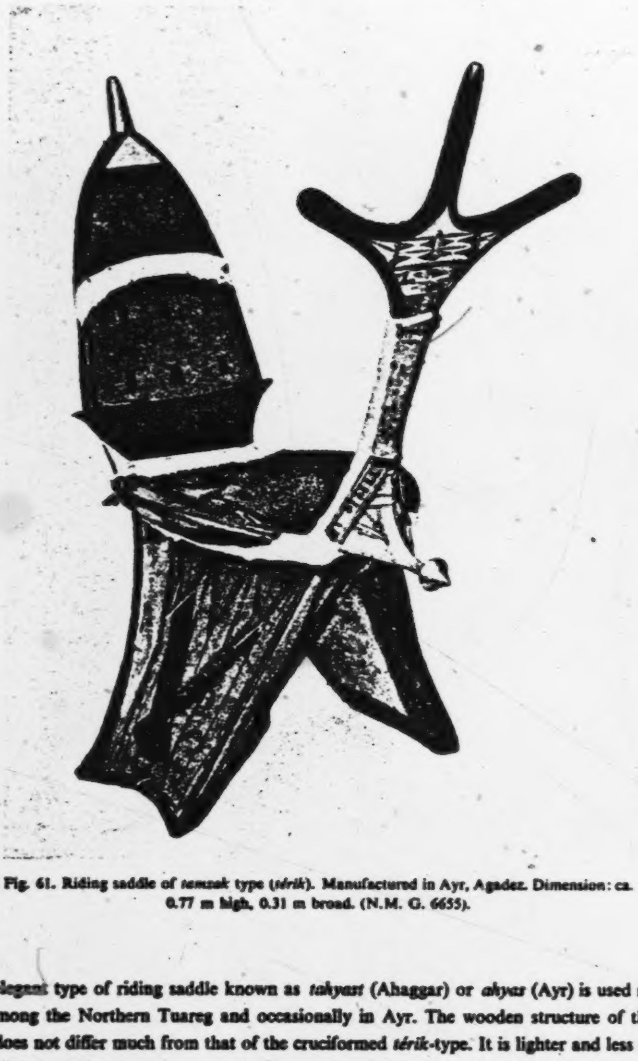

Fig. 61. Riding saddle of *tamzak* type (*térik*). Manufactured in Ayr, Agadez. Dimension: ca. 0.77 m high, 0.31 m broad. (N.M. G. 6655).

A less elegant type of riding saddle known as *tahyast* (Ahaggar) or *ahyas* (Ayr) is used rather frequently among the Northern Tuareg and occasionally in Ayr. The wooden structure of this saddle (Fig. 63) does not differ much from that of the cruciformed *térik*-type. It is lighter and less solid, and the saddle is not much esteemed among the Tuareg who use it because it is cheaper. It is manufactured 492* [564]

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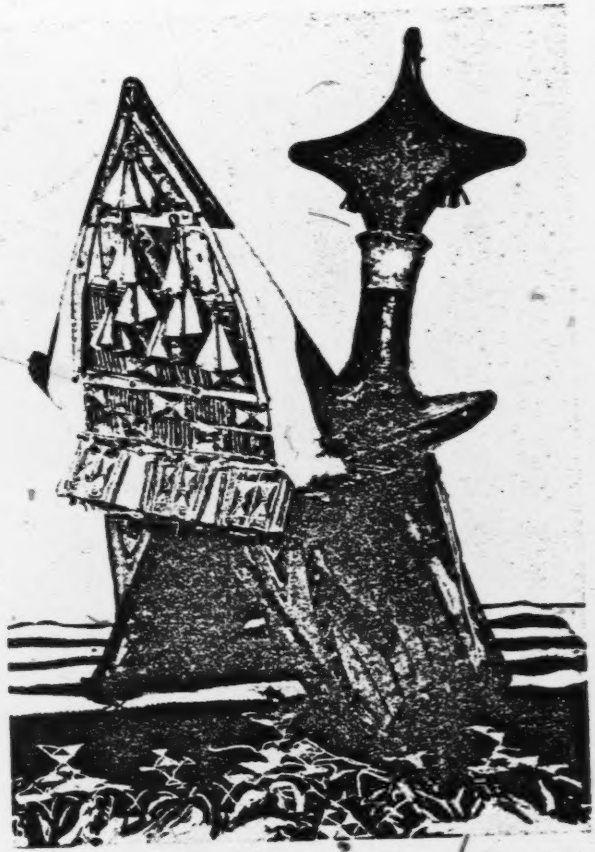

Fig. 62. Riding saddle of *bertekes* type (*térik*). This saddle was brought to the Musée de l'homme by Duveyrier. From Tasilé-n-Ajjer, probably manufactured in Ayr.

*492 mainly by blacksmiths of Adɽaɽ-n-Foɽas, which region is considered its original homeland, but it is
564 also made at Agadez in Ayr where the wooden skeleton is often covered with hairy ox hide. The wooden
[237] structure of this saddle type is described in literature (Gabus 1949, pl. XII; 1957, p. 176).
[113] In Ayr and further south in Damergu I have often seen a very simple riding saddle which has never
been mentioned in literature. It is known as *kantarki* or *delobi* (Figs. 64–65), and it is very interesting

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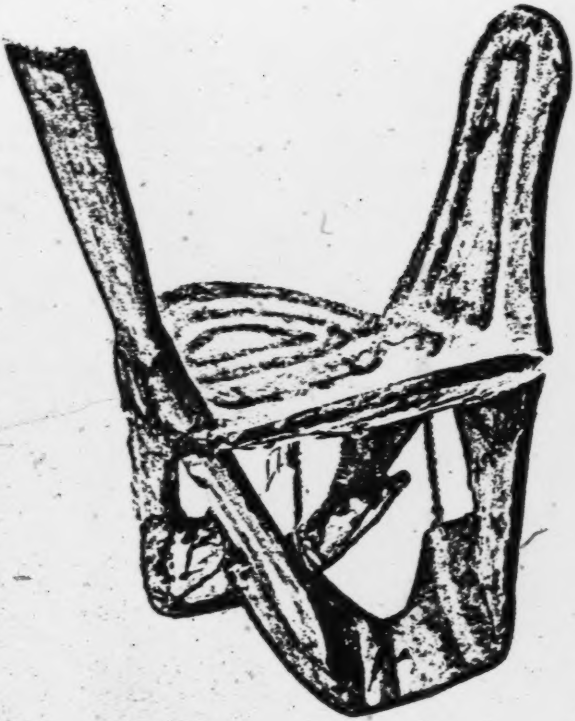

Fig. 63a. Riding saddle of the *tahyast* type. The saddle is made of wood of the *turha* tree (*Calotropis procera*) which is often used for riding saddles. The wooden frame is lashed with strips of raw hide and covered with depilated ox-hide which is coloured with the dyes known as *herki*, *temesaruak*, and *tawakent* (cf. p. 282). Bought in Ahaggar, manufactured in Adṛaṛ-n-Foṛas, or in Ayr. Dimension: 0.55 m high, 0.51 m broad. (N.M. G. 5189).

*492 that it is manufactured by pastoral Tuareg of these regions and not by blacksmiths, though the latter
[564] may also make such saddles for their own use. The wooden structure is made of two cross-bars, which
[412] are natural prongs fashioned with knife and axe, and these two cross-bars are lashed to each other
at their lower ends, or are connected with each other by means of two sticks crossing each other at
[824] the two sides. A wreath of slender roots of *afagag* (*Acacia Raddiana*) covered with a network of dum
[283] palm rope may serve as a saddle seat, which can also be covered with a piece of matting plaited from
[285] the leaves of the dum palm tree. This very simple saddle may perhaps be considered the prototype of
the more developed riding saddles of the *térik* and *tahyast* types.

All the above-mentioned types of riding saddles are placed in front of the camel's hump and rest
upon two to four saddle cloths, the number depending upon their quality and also upon the nutritional
condition of the animal. Two saddle-cloths are considered enough for a fat camel while four should
be applied to a very thin one. Saddle cloths are frequently called *ésatfar* (Ayr) or *asetfer* (Ahaggar),
but this name is in fact used for everything placed upon the back of an animal to protect it against
galling from the luggage and/or the saddle. Saddle cloths for camels are properly termed *éselis* (Ayr)
[286] and *ameslaḳ* (Ahaggar). Both among the Northern Tuareg and in Ayr saddle cloths are generally
made of cotton, but they are also made from dum palm matting and a piece of leather among the
Ayr Tuareg (Figs. 66–67). The riding saddles are fixed to the camel by a single girth known as *ahayif*
[237] (Ahaggar) or *azaw* (Ayr). In the north such girths are normally made from goat-hair while the Ayr
Tuareg use plaited leather (goat-skin). Girths in both regions are frequently furnished with a very
[541] large tassel hanging down from the right side of the camel (Fig. 69). On rare occasions when the Tuareg
[648] ride their camels with all possible speed, e.g., at the annual camel races organized by the French
administration, the riders often secure the position of their saddles by means of a long cord (*ihwéweren*
among the Northern Tuareg) tied around the hind part of the camel as shown by the photograph
Fig. 68.

The camel rider sits in the saddle cross-leged with his feet resting upon the camel's neck. To accelerate
the speed of his riding animal he pushes one of his feet against its neck in step with the rocking gait
*492 peculiar to camels. A whip (*alekkoḍ*) also belongs to the equipment of the rider. Most whips have a
237 single lash made from a twisted strip of hide, but whips provided with two lashes of hide attached to
a wooden handle are also found and are common in Tasilé-n-Ajjer (Figs. 70a–b). The whips used
in the north are said to be made from camel's hide soaked in water; the raw hide is twisted and
kept in this position until it is dry. The Ayr Tuareg say that camel's hide is not well fitted for whips,
which among them are manufactured from the raw hide of a newly-killed ox. A piece of this hide is
twisted and left to dry as in the north. The handle of the one-lash whip is made of cotton wrapped
around the upper part of the lash and covered with coloured goat-skin.

*492 The Ahaggar Tuareg have a particular implement to hasten the speed of riding camels. It is de-
scribed in literature notably by Foucauld. It consists of a slender iron rod 0.35–0.50 metres long,
fixed into a wooden handle. It has a small crook much like that of a staple and is used for scratching
the animal and thus to incite it to greater speed. It is called *azalla*, or *asekreḍ* (Foucauld 1951–52, II,
p. 856 & IV, p. 1960). I have never seen this peculiar implement among the Tuareg.

*492 A camel rider's equipment comprises various types of skin bags of which the most common is a
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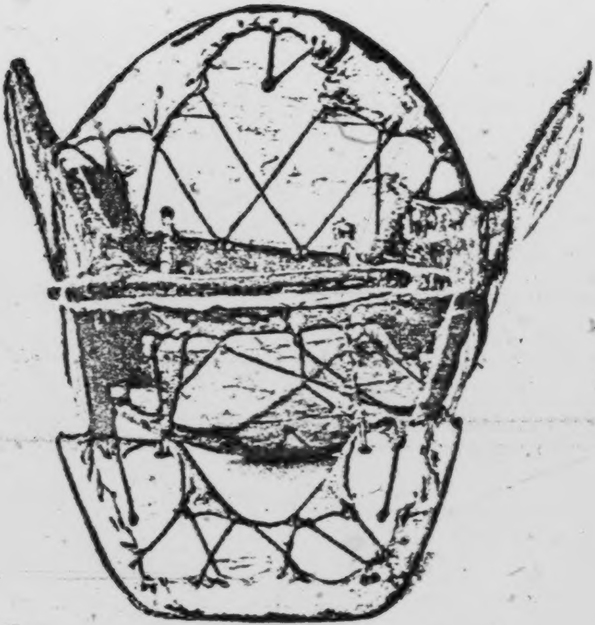

Fig. 63b. cf. Fig. 63a.

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415 huge saddle bag known as *ejjebira*, manufactured exclusively by the sedentary people of Agadez, the *Imeggedezen* (Fig. 72a). Other bags are often used by riders and some of them will be mentioned in the description of skin and leather work.

[283] An important part of the rider's equipment is the drinking bowl (*tamennast*) made from metal and attached to the saddle pommel with a plaited leather cord (*témetrek*); it is particularly common *492 among the Northern Tuareg (Fig. 71). The Tuareg also possess a great many objects which serve [531] exclusively as ornaments for riding camels. The Northern Tuareg adorn their animals with a collar (*tahawt*) made from fine cords of goat's hair, while the Ayr Tuareg use another type of collar called

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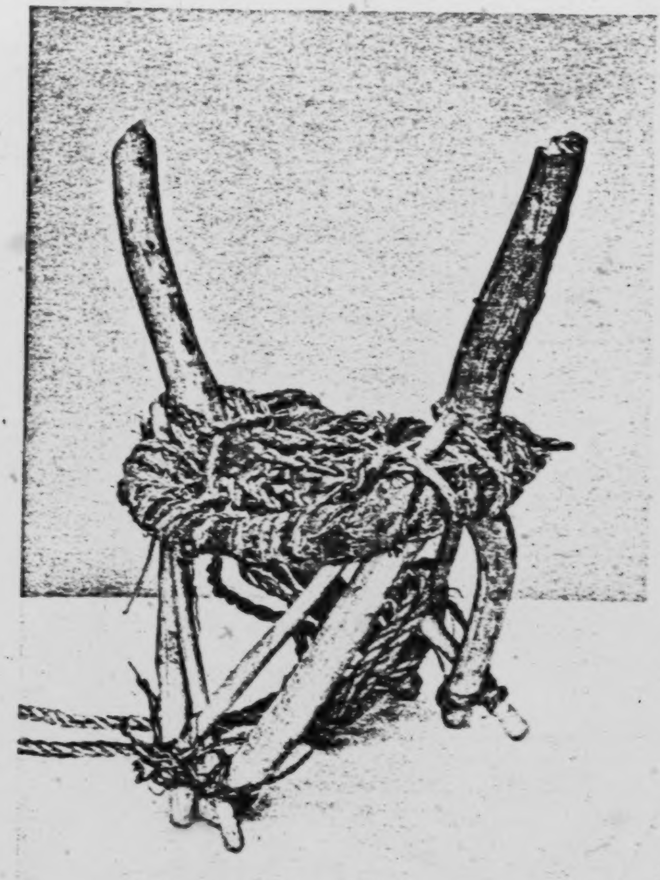

Fig. 64. Riding saddle of the type known as *kantarki* or *delobi*. It is made of two forked boughs of *tamat* acacia (*Acacia flava*) connected with sticks and the seat. The latter is made of slender roots (sing. *tékéwt*) of the afagag *acacia* (*Acacia Raddiana*). These slender roots are bent into a circle, are covered with cotton or similar material, and a kind of net is made of dum palm rope within the circle. Ayr, *Imeggedezen*. Dimension: 0.49 m high. (N.M. G. 6656).

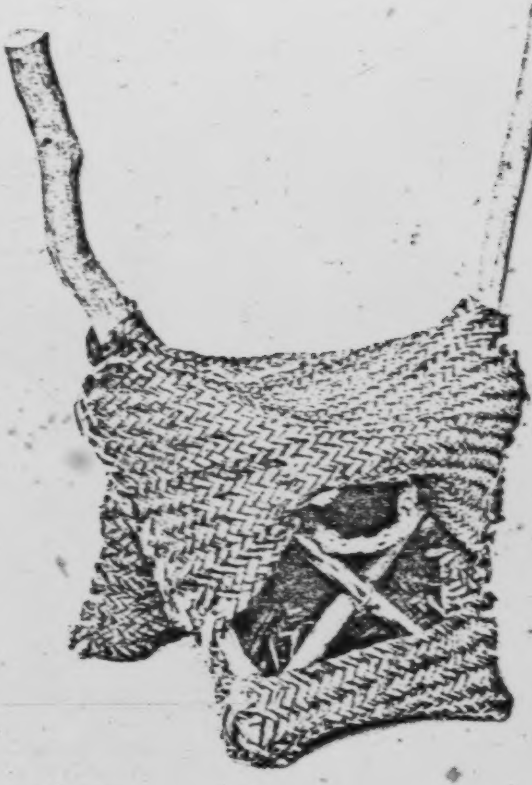

Fig. 65. Riding saddle of the type known as *kantarki* or *delobi*. It is structurally related to the saddle depicted Fig. 64, but is covered with matting plaited of dum palm leaves. Ayr, the *Igendiynen* tribe. Dimension: 0.53 m high. (N.M. G. 6611).

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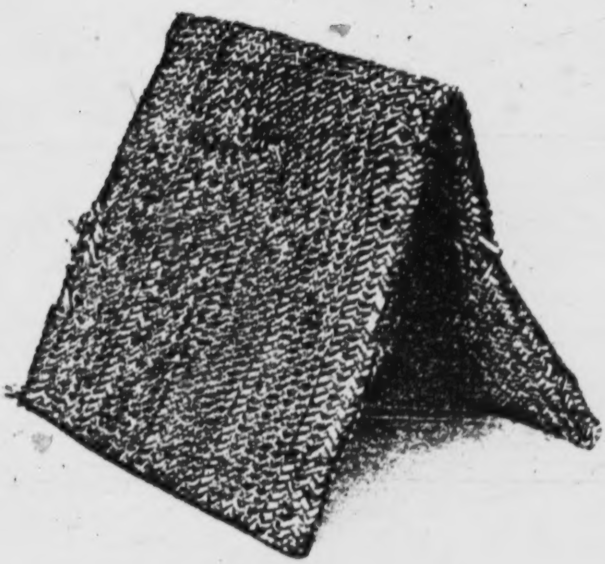

Fig. 66. Saddle cloth (*éselis*) made of dum palm matting. Ayr, the *Imezzureg* tribe. Dimension: 0.28 m high in bent position (N.M. G. 6657).

*492 *ilgam* (Fig. 73–74) made of leather by the *Imeggedezen*. Camels may also be provided with a bell (*anayna*) attached to a neck-collar (Fig. 74b). The Ayr Tuareg also use bells for roaming bull-camels, as I have myself seen, and for rams and he-goats, but never for oxen.

*492 512 565 The camel is used for riding by Tuareg men, while many women never mount camels. Among the Northern Tuareg most women of the true vassal class (*Imrad*, or *Kel Ulli*) only mount camels very occasionally, when they sit behind the saddle of their husbands or close male relatives. Their proper riding animal is the donkey. Women of the *Isekkemaren* class more frequently mount camels which are the correct riding animals for women of the nobility (*Ihaggaren*). Noble women never ride donkeys.

*492 562 In Ahaggar proper riding saddles for women are found only in noble tribes, in the *Iregenaten* tribe, and in tribes of the *Isekkemaren* class. Such saddles are constructionally related to the transportation

saddle known as *tebeyut* or *tkhawit* and described above p. 76 (Fig. 57). The Ahaggar Tuareg have 492*
four sub-types of women's saddles:— (1) *akhawi*, that is a very large saddle at each side provided with 562
a wooden arch; (2) *tkhawit* (*ta-n-tkéwin*), a lighter saddle provided with similar wooden arches; (3)
aragen, a large and heavy saddle without side-arches; (4) *tkhawit* (*ta-n-tehḍaḍ*), a light saddle without
side-arches. These saddle types, particularly the former type known as *akhawi*, are exhaustively 113
described by Foucauld in his dictionary (Foucauld 1951–52, II, p. 723), and a very beautiful specimen
is here depicted from the collection of the Musée de l'homme (Fig. 75). Very elaborate saddles as 564
that depicted are always made by the blacksmiths, but light saddles of the *tkhawit* types may also be 462
manufactured by Tuareg women. Thus women of the *Ireğenaten* tribe south of the Ahaggar Massif
make saddles of the lighter type themselves. Women's saddles may sometimes be provided with a
roof made from curved and bent boughs covered with cotton or blankets. This peculiar construction
is known to the Ahaggar Tuareg as *ahennaka*.

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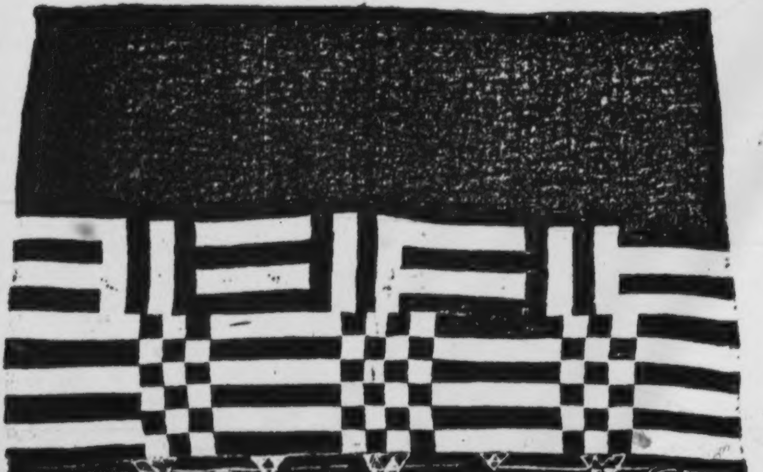

Fig. 67. Saddle cloth (*ameslaḳ*) of cotton and embroidered with coloured thread. Ahaggar, the *Ağuh-en-tehlé* tribe. Dimension: 0.771 × 0.620 m. (N. M. G. 5190).

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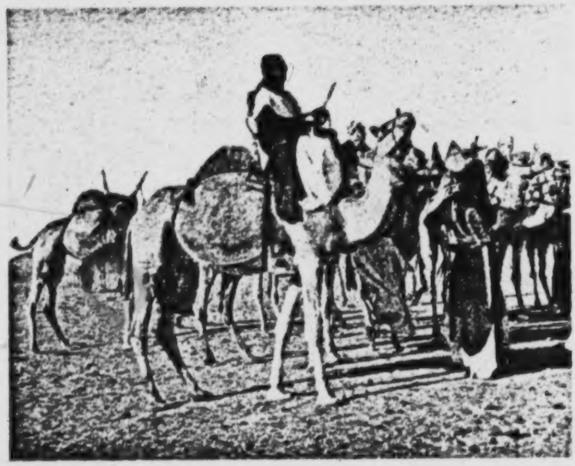

Fig. 68. Tuareg camel riders prepared for a camel-race. The fixed position of the saddles is secured by means of a long cord (*ihwéweren*) tied around the hind part of the camel. Tasilé-n-Ajjer.

*492 [562] The saddle types just mentioned are unknown to the *Kel Ferwan* Tuareg and apparently also to other Tuareg of Ayr. Tuareg of the *Kel Ferwan* drum-group refer to these women's saddles as "Arab saddles", and when their women mount camels on festive occasions they do not use proper saddles but a kind of chair built up upon two very large cushions manufactured by the *Imeggedezen*, and stuffed with hay. The arrangement of this saddle-chair is complicated and it takes some hours to finish it. It is built as follows:— The two large cushions (*éstigen*, sing. *ésteg*) are placed on the camel's back in front and behind the hump. They support a superstructure known as *tésagaley* and made from various objects belonging to the tent in the following way:— (1) Two large and oblong skin-bags are stuffed with hay or old cotton pieces and each of them is wrapped with a coloured blanket to form an oblong parcel. (2) To stay these parcels a rolled bed mat (Fig. 212b) is tied horizontally to each of [285] them, and they are laid parallel with each other on the ground. (3) A very long mat plaited from dum palm leaves is rolled up and wrapped into a coloured blanket or a coloured piece of cotton. It is bent into a U-form and thereupon attached to the two oblong parcels by means of cords. This superstructure is further covered with coloured blankets and pieces of cotton. It is placed upon the two large cushions and tied to them and fastened to the camel by means of cords and girths. When a woman rides in such a saddle-chair she sits behind the animal's hump so that she cannot reach the camel's neck with her feet. The back of the U-formed mat prevents her from falling backwards. The structure *492 562 of the saddle-chair may be seen from the photographs (Figs. 76–77). It should be understood that a saddle made in so difficult a manner is not used by the women except on festive occasions, such as [484] travelling to attend a marriage or an Islamic feast. Apart from the very few noble women belonging [565] to the two noble tribes within the *Kel Ferwan* group all women of this drum-group normally ride

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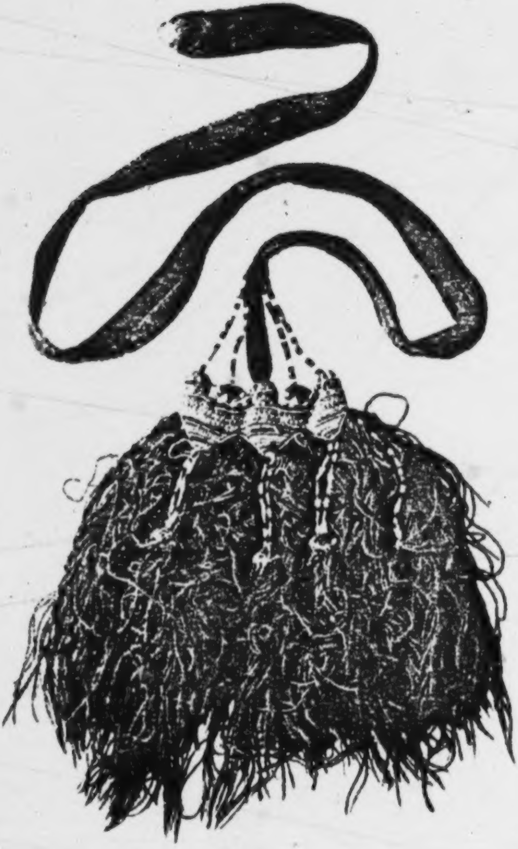

Fig. 69. Camel girth (*aheyif*) made of goat's hair and provided with a large tassel of the same material. Ahaggar, *Kel Ṛezzi*. Dimension: 3.00 m long. (N.M. G. 5826).

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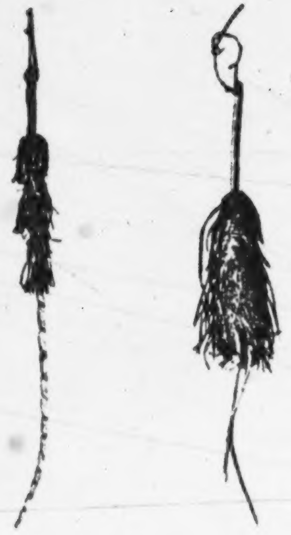

Fig. 70a-b. Tuareg camel whips (*alekkoḍ*, pl. *ilekkoḍ*).

a. Whip with a single lash. Collected in Ahaggar by Olufsen. Dimension: 1.08 m long. (M.N. G. 1.138).

b. Whip with two lashes. Tasilé-n-Ajjer, the *Uraren* tribe. Dimension: 0.845 m long. (Author's collection).

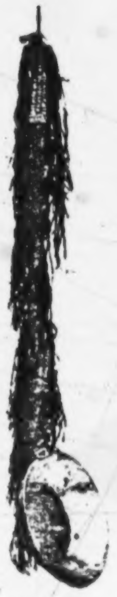

Fig. 71. The drinking bowl (*tamennast*) made from tinned brass and fixed to its ornamented leather cord (*témetrek*) by means of which it is attached to the saddle pommel (cf. Fig. 49). Ahaggar, the *Ağuh-en-tehlé* tribe. Dimension of the bowl: 0.258 m in diameter (upper part). Dimension of the leather cord: 0.685 m long. (N. M. G. 5287).

*492 562 donkeys, but, as in the North, they sometimes mount the riding camels of men sitting across the animal behind the saddle.

*492 531 233 192 The Tuareg take a keen interest in the adornment of all objects used for riding camels. The richly decorated saddles and the ornaments of the riding gear express the particular value attached to the animals used for riding. But Tuareg interest in camels is perhaps more clearly understood, when we consider their rich camel vocabulary.

The Tuareg have one word which can be used for any camel regardless of its sex and age, its colour, and all other particular qualities. This word (*amağur*, pl. *imuğar* in the northern dialect) does not seem to have its equivalents in vocabularies of other domestic animals which collectively are referred to by means of a sex term of adult animals (e.g., *ulli* = "goats"). The word *amağur* (pl. *imuğar*) is used in conversation, but it is heard less frequently than camel terms which have a very definite meaning.

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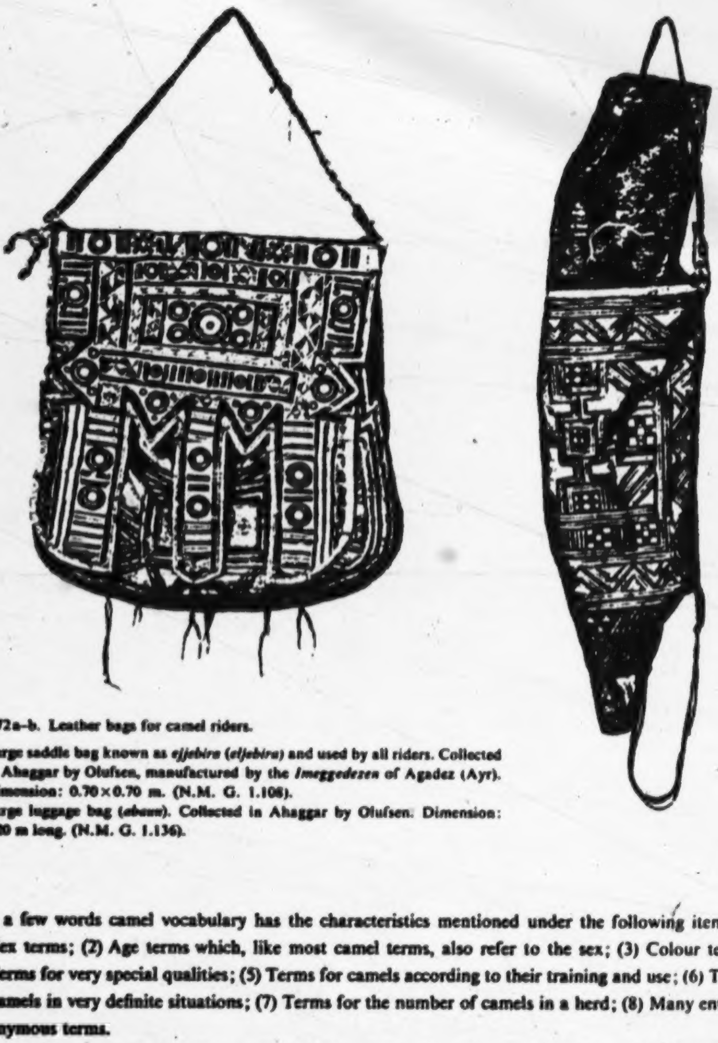

Fig. 72a–b. Leather bags for camel riders.

- **a. Large saddle bag known as *ejjebira (eljebira)* and used by all riders. Collected in Ahaggar by Olufsen, manufactured by the *Imeggedezen* of Agadez (Ayr). Dimension: 0.70 × 0.70 m. (N.M. G. 1.108).**
- **b. Large luggage bag (*abawn*). Collected in Ahaggar by Olufsen. Dimension: 1.20 m long. (N.M. G. 1.136).**

In a few words camel vocabulary has the characteristics mentioned under the following items:— 233
(1) Sex terms; (2) Age terms which, like most camel terms, also refer to the sex; (3) Colour terms; 192
(4) Terms for very special qualities; (5) Terms for camels according to their training and use; (6) Terms for camels in very definite situations; (7) Terms for the number of camels in a herd; (8) Many entirely synonymous terms.

The Northern Tuareg use the term *amis* (pl. *imnas*) for all male camels including geldings, and the term *talemt* (pl. *tellemin*) for all she-camels. In Ayr a male camel is known as *alem* (pl. *imnas*) and a

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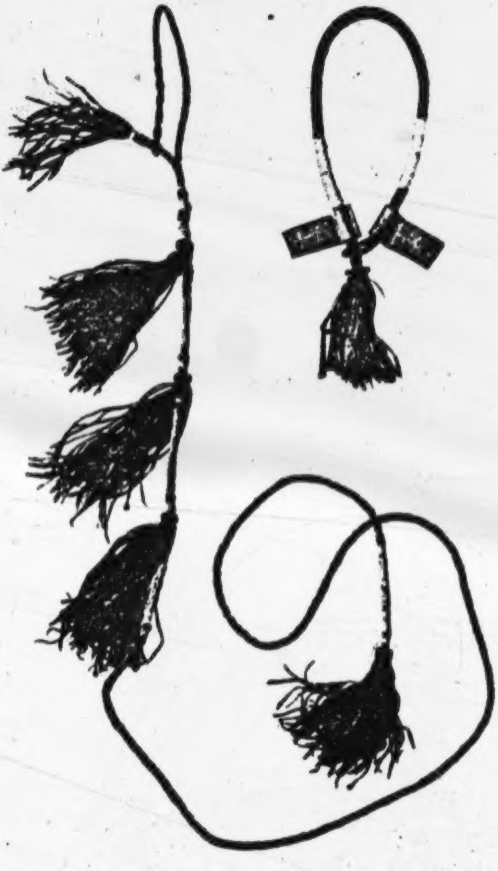

Fig. 73a–b. a. Camel rein (*irézem*) plaited of leather (goat skin) and ornamented with fringes of the same material. Ayr, the *Imeggedezen* of Agadez. Dimension: 2.70 m long. (N.M. G. 6653).

b. Neck collar (*ilgam*) which serves as an ornament of riding camels. Made of leather (goat skin). Ayr, the *Imeggedezen* of Agadez. Dimension: 0.43 m. (N.M. G. 6654).

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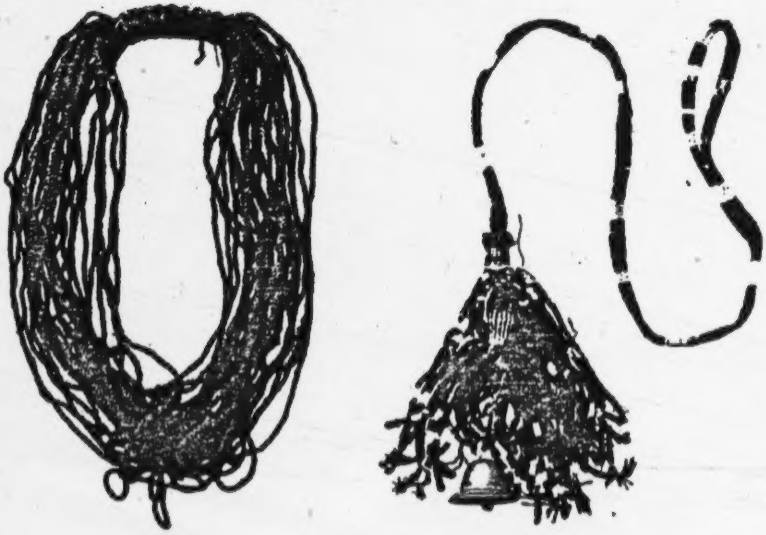

Fig. 74a–b. Neck collars for riding camels.

a. Collar made from fine cords of goat's hair. It is called *tahawt*. Ahaggar, the *Aguh-en-tehlé* tribe. Dimension of the winding seen at the top: 0.07 m long. (N.M. G. 5193).

b. Neck collar (*tahawt*) plaited from goat's hair, ornamented with coloured thread, and provided with a small brass bell (*anayno*). Ahaggar, the *Aguh-en-tehlé* tribe. Dimension: 0.995 m long. (N.M. G. 5191).

she-camel as *talemt* (pl. *tollemin*). In both groups a bull-camel is termed *amali* which word is generally used only for bull-camels reserved for breeding.

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The Tuareg of Ahaggar and Tasilé-n-Ajjer have definite age terms for camels until they are eight years old. These terms may be seen from the list on p. 102 where they are mentioned in their feminine forms. At the age of eight years the dentition of a camel is fully developed and later it becomes more difficult to state its exact age. Camels older than eight years are therefore generally known by one and the same term as long as they are strong enough to be used for riding and transportation, or for breeding. The age terms used among the *Kel Ferwan* Tuareg of Ayr are different from those mentioned from the north. They are used with precision for camels up to eight years old, and if the exact age of a camel is known by the owner he may continue to apply such terms for camels up to fifteen years old. Older camels are just referred to as "camels" or "old camels".

Colour terms of camels are many. I find it appropriate to list colour terms of the Northern Tuareg

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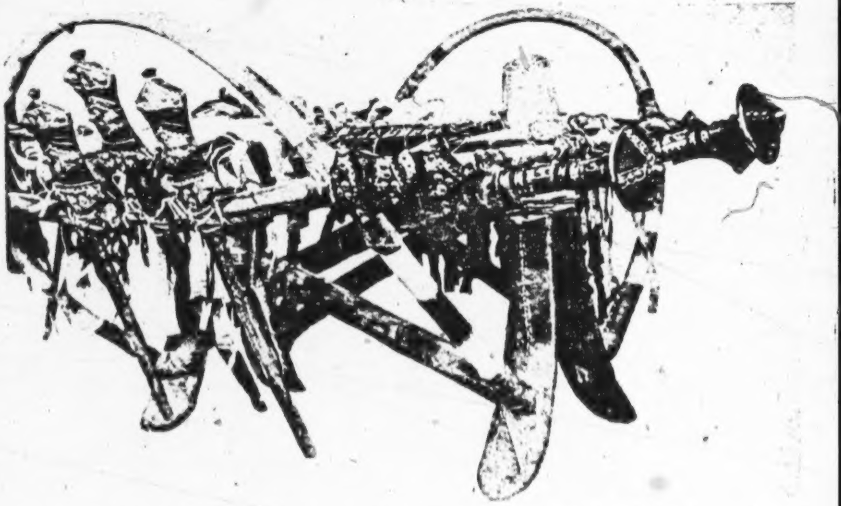

Fig. 75. Women's camel saddle (*akhawi*). Ahaggar, noble tribes. (Musée de l'homme).

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and the Ayr Tuareg separately, because they frequently use different terms for the same colours and because the Ayr Tuareg have a great many piebald animals which seem to be rare in the north. In the north most animals are of one colour, and the common terms of Ahaggar camels are the following:— *adegnas* (dirty white), *ébeydeġ* (white), *éberim* (whitish yellow), *atlaŗ* (mahogany), *abẓaw* (whitish), *émenġel* (dark grey), *alemlaŗ* (grey), *éẓerif* (metallic grey), *ahaggar* or *ézeggeŗ* (red), *abhaw* (reddish-brown), and *ékawél* (black). There are a few other terms. I have noted the following terms of piebald camels in Ahaggar:— *éḍemḍem* (a dark or red camel being white on the nose or around the mouth), *iigen* (a camel with white legs), and *azerŗaf* which term seems to be applied to all camels of two colours, and also to other piebald domestic animals.

I have noted the following terms of camels of one colour among the *Kel Ferwan* Tuareg of Ayr:— *adegnas* or *wa mellen* (white), *abzaw* (whitish), *atlaŗ* (mahogany), *égadé* (light brown), *awraŗ* (something between light grey and light brown), *éberhey* (something between whitish and light grey), *aberog* (greyish), *ingal* (dark grey), *ézerif* (metallic grey). Most camels of one colour belong to one of these shades, which are frequently so close to each other that a correct description and translation into European colour words is difficult. Most one-coloured camels I have seen in Ayr were *adegnas*, *abzaw*, *atlaŗ*, and *ézerif*, but piebald camels seem to be more common than the unicoloured animals. I have noted the following terms of piebald animals:— *amulas* (white blaze, white colour around the mouth, the remainder of the animal being dark), *agusrer* (the back and partly also the neck greyish

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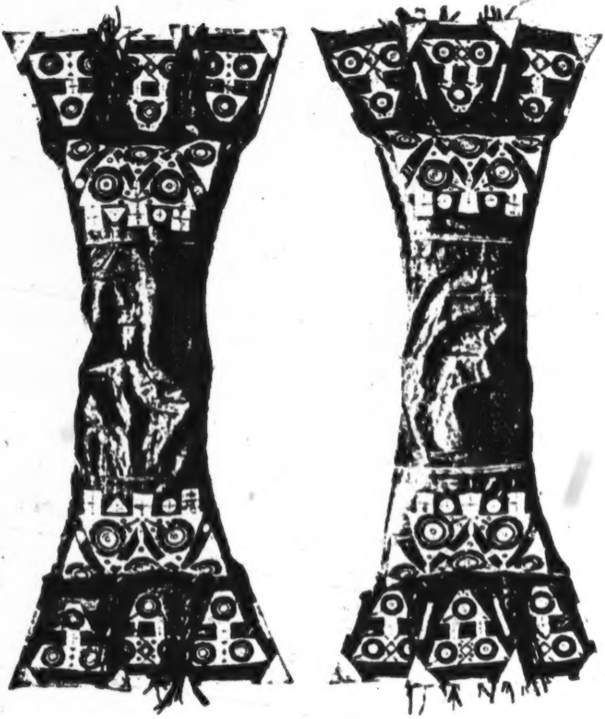

Fig. 76. The two large cushions (*ésteg*, pl. *éstigen*) which form the basis of the woman's camel saddle in Ayr. The *Imezzureg* tribe. Dimension: 1.90 m. (N.M. G. 6659a-b).

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brown, the remainder of the animal white), *énil* (dark grey with white colours on the belly, the hind thighs, and the four legs), *awinaḳ* (dark grey back but with white on the sides close to the hump, on the hind thighs and legs, on the forelegs, and on the tail), *azurzum* (white on the hind thighs, the remainder plain), *ajmilal* (camel with numerous small circular spots close to each other), *azeṛṛaf* (camel of two colours, black and white, or black and red; there is no definite rule for the distribution of these

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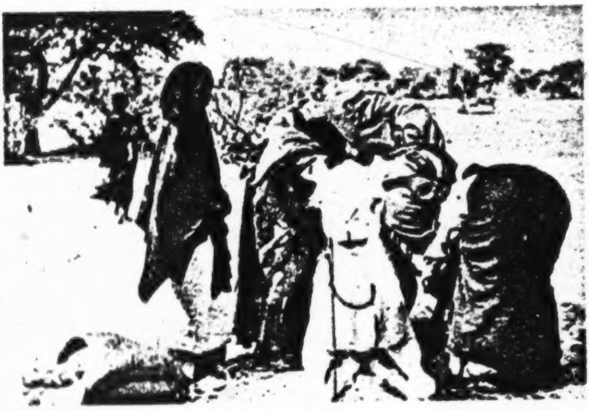

Fig. 77. The woman's riding saddle built upon large cushions (*éstigen*). Ayr, the *Imezzureg* tribe.

233 192 two colours on the animal). There are other terms for piebald camels, but I have only mentioned the colours I have seen myself, as it is extremely difficult, not to say impossible, to note down colour terms without seeing the animals. One characteristic of many piebald Ayr camels has not been mentioned above: They very frequently have red-white eyes, and such animals according to the Tuareg are always deaf. Red-white eyes and deafness seem to go together with certain forms of piebaldness, so that all camels termed *azerṛaf* and *ajmilal*, and some camels termed *agusrer*, *awinaḳ*, and *azurzum* are deaf. *[492] This, however, does not prevent the Tuareg from using these animals for riding and transportation, and even deaf bull-camels are frequently used in breeding.

The Northern Tuareg have a great many different terms for particular qualities of their camels which are named after their way of roaring and walking. The following examples come from the Ahaggar Tuareg:— *ahenderremma* or *aṛenennas* (a camel which has the habit of neighing with joy when it sees something very agreable; e.g., a she-camel seeing its calf when it returns to the camp from grazing), *émerreġreġ* (camel which roars mournfully when it becomes separated from its master, or from another camel with which it normally grazes; certain camels are particularly attached to each other and never separate during grazing), *aṛewaha* (a camel which has the habit of uttering the plaintive roaring named *taṛewahit* during loading and unloading), *aseḳḳelela* (a rutting camel uttering the sound named *teṛelelit*). The Ahaggar Tuareg have other terms for camels to denote their behaviour. Thus there is a particular term for a camel which becomes scared when walking in a caravan after sunset so that it throws off its load and gives rise to a lot of panic among the other caravan animals.

As examples of camel terms given according to the animals' way of walking, mention should be made of following examples from Ahaggar:— *ategemtegam* (camel which takes very short steps), *aseffakas* or *alemdeyyas* (camel which takes very long steps). The Tuareg of Ahaggar have many special terms for camel-gaits. To indicate this I quote the detailed description of gaits given by Fou-

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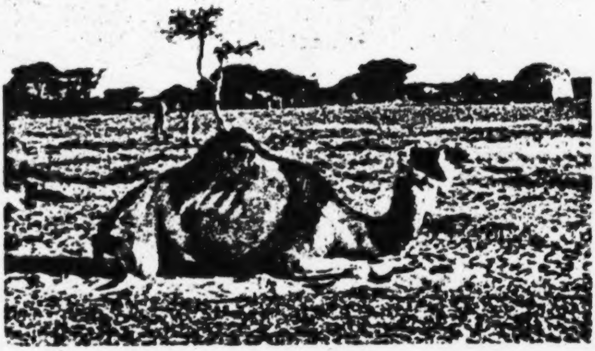

Fig. 78. She-camel with the colour name *tazurzumt*. Ayr, the *Imezzureg* tribe.

cauld:— *sekkedi* (to let camels trot very slowly at an artificial gait known as *téredeyt*), *setteles*, or 233
sellwen (to let camels walk at a normal ambling pace), *eğ senat-senat* (to let camels trot slowly at a 192
gait known as *senat-senat*), *sekkeber*, *keburet*, and *keberkeber* (a kind of trotting named *akahur* which is somewhat faster than *senat-senat*), *regiregi* (to let camels pace or trot at the types of gait known as *tétalist*, *senat-senat*, and *akabur*), *eğ yukey-eder-tayit* (to let camels adopt a fast trot known as *yukey-eder-tayit*), *uylal* (to let camels adopt a sharp trot), *enteğ* (to let a camel gallop), *awdet* (to let camels trot or gallop; this verb does not refer to any particular type of gait but to several, from the slow trot known as *senat-senat* to the very fast gallop known as *tabederat*). These gait-terms are used only for camels, but the Tuareg also have terms for gaits of other domestic animals – particularly for those of horses (cf. Foucauld 1951–52, II, p. 553 ff.). The gait known as *téredeyt* is considered very elegant by the Tuareg, who train camels to walk in this way already when the animals are very young. This is done by means of a large and wide hobblerope tied around the forelegs above the knees the animals being forced to walk by whipping them lightly on the legs (cf. Foucauld 1951–52, IV, p. 1696). As far as my knowledge goes the Ayr Tuareg have terms very similar to those mentioned above, but I have not taken them down in my notes and only remember very few of them, e.g. *tarajawit* (a camel which roars during loading and unloading), *alem-n-akabur* (a camel walking with very quick steps), *alem-n-emehal* (a camel which takes very long steps).

Considering the very special camel terms just mentioned, it is only natural that the Tuareg also 233
have many terms to cover the use and training of camels. Thus the Ahaggar Tuareg can refer to a 492*
normal heavy pack-camel by one of the following terms which are synonymous:— *abakhul*, *dekhkhe-* 192
dekh, *agelgall*, *akhelkhall*, and *érikhi*. For riding camels the following terms can be mentioned:— *arlam* (any riding camel), *aserensera*, *tanegmot*, *taletmot*, *arretus* (excellent and very fast running riding animals). There is also a term for a fully-trained riding camel (*amanun*), and another for a camel which is not yet fully-trained (*asanan*).

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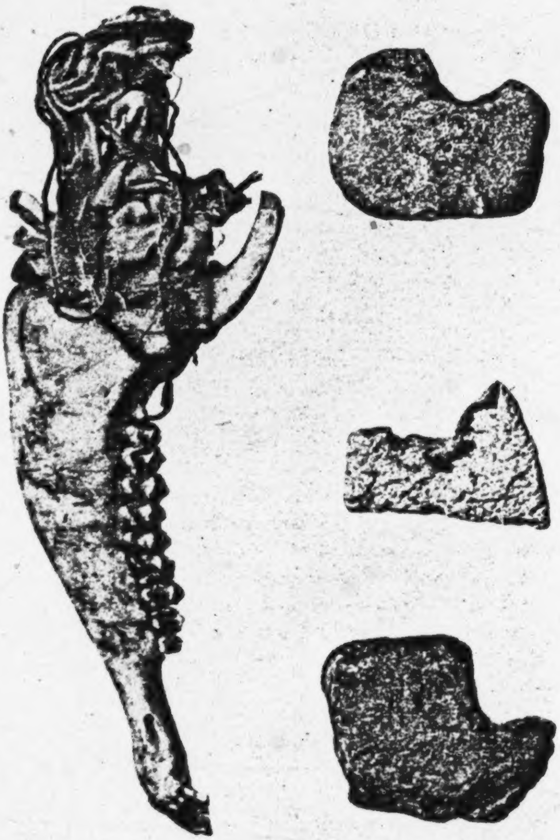

Fig. 79a–d. Children's toy camels. a. Jaw-bone of goat provided with saddle and rider. It is known as *aknar n amis*. Ahaggar, *Ḥarratin* of Abalessa. (N.M. G. 5914).

b–d. Three roughly-cut stones used as toy camels by Tuareg children. Ahaggar, the *Kel Aknet* tribe. Dimensions: 0.067, 0.063, and 0.073 m. (N.M. G. 6604 b, d, a).

As an illustration of camel terms given to animals in very special situations, I give the two following 233 examples:— (1) A she-camel when driven out for grazing while its calf is tethered in the camp is known 192 as *tamantak* to the Ahaggar Tuareg, as *tenteg* to the *Kel Ferwan* Tuareg of Ayr; (2) A pack-camel when walking in a caravan is known to the Ahaggar Tuareg as *amekkalu*, while the corresponding [492]* term in Ayr seems to be *alaway*.

For the size of herds the Ahaggar Tuareg have the following terms:— *tazegga* (a small herd of 20-40 camels and/or she-camels), *ahammal* (from very few animals up to about one hundred, the herd consisting mainly of male camels), *adyaw* (a very large herd comprising about one hundred animals at least, regardless of their sex). As far as my investigations go these terms are not known among the *Kel Ferwan* Tuareg of Ayr. They refer to a small number of camels as *imnas* (10 to 15 animals comprising male and/or female camels), while a bigger herd is known as *tollemin* (comprising male and/or female camels).

All the above-mentioned camel terms are with very few exceptions used exclusively for camels and not for other animals. Extensive vocabularies are found also for other domestic animals and for many aspects of stock-breeding, but the camel vocabulary is extremely large by comparison. This seems understandable as camels have a many-sided use to the Tuareg, and there can be no doubt that camel-terms like goat-terms are primarily a linguistic technique of practical value – a technique which enables the Tuareg to speak about their animals with precision. But this is evidently not the sole reason why the camel vocabulary is so extensive that a detailed description of all terms would necessitate an independant book on this subject. For the camel vocabulary is extremely large not only [181] because of its practical value, but also because Tuareg interest in camels is not solely confined to their practical uses. This is intimated, I believe, by some of the peculiar terms mentioned and above all by the very many synonyms.

Camels, in contrast to most domestic animals, have social functions among the Tuareg. It is true 233 that bride-wealth in vassal tribes of the Northern Tuareg may be paid in goats (25–30 animals), but 583 this is the case mainly among the *Kel Ajjer* while most Ahaggar vassals will claim that bride-wealth 565 should be paid in camels. The true vassals of Ahaggar give one to three camels for a wife, the payment being dependent upon the bride's tribe – in most tribes it is the custom to give only one camel, while two tribes will claim two and three camels respectively for their women. Among the Ayr vassals of the *Kel Ferwan* group bride-wealth may be paid in cash, though the bride-wealth in these tribes is generally one camel as among most northern vassals. But the size of bride-wealth among the Ayr Tuareg is frequently discussed by representatives of the families, and it depends much upon the age, quality, and wealth of the bride. For very desired girls the payment may rise to two or three camels while for others the payment is only "two camel feet", that is a "half share in a camel"; it is said that even "one foot" is sometimes accepted as bride-wealth. This system of giving shares in [578] camels may give rise to trouble between the persons who share the same animal. Among noble Tuareg, both in the north and in Ayr, bride-wealth can be paid only in camels. Among noble tribes of the Northern Tuareg the bride-wealth to be paid is fixed at seven camels, while among the few noble Tuareg now left in the *Kel Ferwan* drum-group the price, it is said, varies between ten and twenty camels. Camels given for bride-wealth are generally *ilusan* (sing. *alegges*) (fem. *tilusin*, sing. *taleggest*), 233
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233 583 601 that is camels two to three years old, and the same word is also used in kinship terminology for brothers and sisters-in-law.

233 436 593 432 584 684 643 683 The Tuareg make social payments and many indemnities in camels. If, as may happen, a woman permits her husband to take a second wife, she will claim at least one camel from him. Again, if a woman feels herself badly treated by her husband she will go to her parents' camp and not return to her husband until she has been presented with a camel. Parents will sometimes induce their children to marry against their own feelings by means of a gift of camels. In Ahaggar the indemnity for adultery is fixed at three camels paid by the seducer, while one camel is given by an unfaithful wife. However, these camels are not given to the deceived spouse, but to the supreme chief of Ahaggar, the *Amenukal*. For the knocking out of a tooth two camels must be given, but if the injured person is a woman the payment is five camels. For the destruction of an eye the indemnity is fixed at 25 camels. The same payment is made for the cutting off of a hand or a foot, the cutting of a finger or a toe being fixed at

233 436 682 a price of five camels. In agreement with this system blood-wealth in Ahaggar was fixed at one hundred camels in the past. There were quite definite rules governing the age and appearance of the camels to be paid for a slain man. They should all be she-camels of different age, and of ten distinct colours as follows:—

	Age			*Colour*	
10	*tilǧad*, or *chét awétay*	(one year old)	10	*tibeydeǧin*	(white)
10	*tilusin*	(2 years old)	10	*titlaṛin*	(mahogany)
10	*teḳḳenifadden*	(3 years old)	10	*tizeggeṛin*	(reddish)
10	*tiṛuyar*	(4 years old)	10	*tibhawin*	(reddish brown)
10	*chét essin*	(5 years old)	10	*tilemlaṛin*	(grey)
10	*chét okkoẓ*	(6 years old)	10	*tiẓerifin*	(metallic grey)
10	*timesseḍas*	(7 years old)	10	*timenǧelin*	(dark grey)
10	*chét tahalt*	(8 years old)	10	*tikewelin*	(black)
20	*tireǧǧanin*	(more than eight years old; she-camels considered neither young nor old)	10	*tizeṛṛafin*	(piebald)
			10	*tiwinaṛin*	(white cornea)

233 822 *492 643 The actual value of a camel is never judged from its colour, but colours have a certain æsthetic value, and wealthy Tuareg who keep several riding camels will always have animals of different colours. This is the case with the present *Amenukal* of Ahaggar, who is said to possess between ten and twenty camels trained for riding.

233 857 565 524 232 324 868 181 Camels play a great part in the life of the individual. Boys of the vassal class may be set to herd goats, but their games centre round camels, and they take no particular interest in other domestic animals. For their games very small boys have camel puppets which are jaw-bones of sheep and goats (Fig. 79a), or roughly-cut stones (Fig. 79b–d). These playthings are their "riding camels", "she-camels", and their "caravans". Boys learn to travel on camel-back at a very early age. When three or four years old they sit behind their father's riding saddle or on the top of a loaded pack-camel, and all boys can ride a trotting camel without a saddle before they are ten. Boys grow up with an intimate knowledge of camels and camel-breeding, and with very little interest in any other subject.

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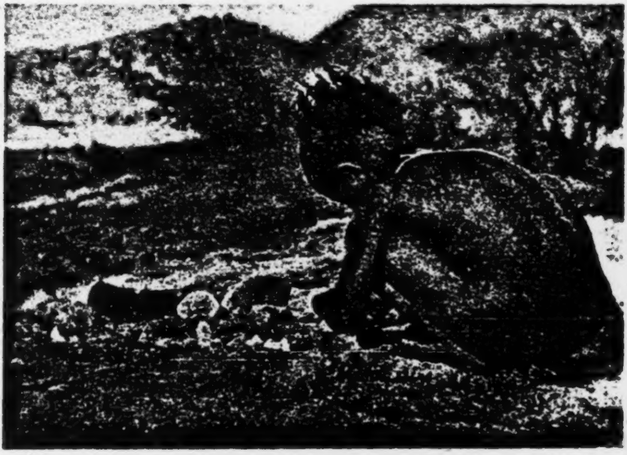

Fig. 80. Tuareg boy with his toy camels of cut stones. Ahaggar, the *Kel Ahnet* tribe.

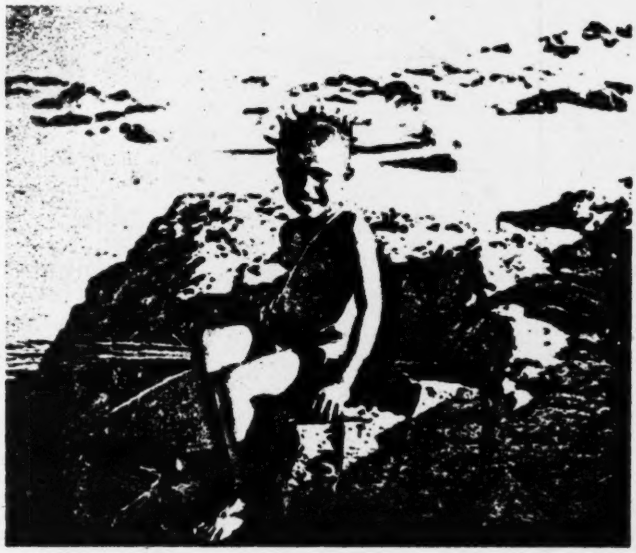

Fig. 81. Tuareg boy playing camel-riding on a rock. Ahaggar, the *Kel Ahnet* tribe.

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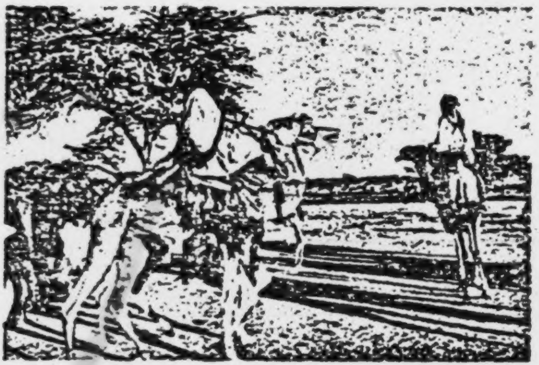

Fig. 82a. Tuareg performing the ceremonial camel-ride on the first wedding day. The women stand in the shade of the *afagag* acacia and sing and drum while the men ride around them two by two. Southern Ayr, *Ifrwdien*.

857 Boys and girls may play together, but there is a tendency for them to separate in their games. Boy-
233 games centre round camels, while the games of girls centre round the family life of the tent and certain
[524] domestic tasks. But though camels are never tended by women, girls also make camel figures from
cotton stuffed with hay, though they do not make figures to represent goats and donkeys which among
[566] vassals are connected with women and tended by them. The emphasis on camels in girl's games is
due to the fact that camels have important functions in social life as described briefly below.

884 Tuareg initiation consists in the adoption of the veil by young men, and a similar piece of cotton
[291] used as a head-cloth by young women. The veil is adopted by men when 16–18 years old, the head-
[881] cloth by women somewhat earlier shortly after the first menstruation, or at marriage. At initiation the
[412] young man is presented with a sword, and if he does not already possess a riding camel with a saddle
*[492] it will be given him on this occasion by his father, perhaps by his mother's brother. The young man is
[517] now a warrior and a camel man, and he will take part in nightly gatherings of young people of both
[832] sexes to sing and make music. These nightly gatherings are very often followed by love-making and
*[492] the riding camel and the ability of the young man as a rider play a great part for his success in love.
[565] The beauty of the riding camel, its saddle gear, and the way it is ridden are all to some extent considered
qualities of the rider. Thus when women at nightly gatherings praise young men in their songs they
[533] will also praise the riding camels. And when a girl likes a young man she will present him with coloured
[431] skin bags, reins, embroidered saddle clothes, and similar objects to be used as ornaments for his
[533] riding camel.

526 In a ceremonial ride termed *ihufan* (*ilugan* in Ayr), which is performed at weddings and certain other
*492 feasts, the young men have a particular opportunity to display the beauty of their camels and their
685 own ability as riders. The ride takes place not far from the wedding tent on a level sandy place where
[512] the women gather to sing and drum, while the men dressed in their finest clothes ride their ornamented
[533] camels to and fro past the women, who praise the beautiful camels and the skilled riders by their
songs, their music, and by shrill cheers. In this ceremonial ride the emphasize is not so much on such

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Fig. 82b. Cf. text Fig. 82a.

qualities as strength and speed, but rather on elegance and sublimity. The riders sit straight in the 526
saddles without watching the crowd of women, and the camels are ridden at a gentle trot (generally 492*
that known as *senat-senat*; cf. p. 99) with their heads drawn back. In this way the men may also ride 585
their animals round the women in a circle as I have seen in Ayr (cf. Fig. 82).

Camels have important social functions among the Tuareg who take an interest in these animals 233
far beyond their practical value. It may perhaps be useful to compare Tuareg interest in camels with 181
Nuer interest in cattle so brilliantly described by Evans-Pritchard. Nuer caress their animals, and 171
there is a tendency for human beings and cattle to form, so to speak, a single community (Evans-
Pritchard 1940, p. 16–50). This is not exactly true of Tuareg and camels. The Tuareg do not pat their
camels which will not respond to caressing, and they do not live in very close contact with their animals,
most of which frequently graze far away from the camp under the supervision of one or two herds-
men. But the Tuareg nevertheless have much the same feeling towards camels as Nuer have towards
their cattle. They are very fond of their animals. They may abstain from camel's flesh because they 262
are fond of camels and would feel very sick at heart when eating them. But though the Tuareg are
fond of camels as such, they are delighted particularly at the sight of a very fine camel (*akemhur*;
Ahaggar) and may even speak disparagingly of a badly built animal (*amugey*; Ahaggar). Fine camels 554
add to the prestige of a man, while too many animals of poor build may even harm his reputation.
When girls and young women praise camel-riders in their songs they praise those mounted on fine 533
and richly-decorated animals. When camels are mentioned in poetry this may also be done as praise 538
to their owners, as in a poem composed in honour of noble Tuareg of the *Uraṛen* (*Kel Ajjer*) of whom
it is said that "their pack-camels have feet as large as a drum, and the loads they carry are like the
crests of mountains" (Hanoteau 1896, p. 218). Such reference to pack-camels, however, seems to be 492*
rare in Tuareg poetry, while riding camels are frequently mentioned in connection with warfare and
love. Riding camels have much the same esteemed position as had horses in Medieval Europe. Tuareg 171
interest in camels is particularly focused on riding camels and there is a tendency towards identification 492*
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*492 181 [214] [539] of riders and their camels. This is intimated by the following poem quoted from Foucauld's excellent books on the poetry of the Ahaggar Tuareg:—

Ébeydeġ, é ti n ami mellen	My white camel, O woman with white teeth
W-allahi! iḍeġ ul ifel kem	I swear by God, it shall not go raiding, shall not leave you
Ula daŗ ikk am akal ien	It shall not go away from you to another country
U t ḍineŗ ar y arábuh ennem	I lead it to the pastures only to visit you with love again
Ula taharġit d asemmeḍren	Neither in dreams nor in thought
Innin é ham yekk akal ien	Shall it go away from you to another country

(cf. Foucauld 1925-30, I, p. 210 f. for a literal translation).

DONKEYS

231 [192] Donkeys are very important domestic animals in the Tuareg groups I have studied. Most animals are grey or greyish but there are other colours for which the Tuareg have special terms. From Ahaggar the following colour-terms can be mentioned:— *adebara* (greyish), *afawa* (greyish with a white stomach), *ewriŗ* (yellow-brown), *éhenbey*, or *takenbawt* (donkey with a black head), *ékawél* (black). Black donkeys seem to be more common among the Arabs of the Northern Sahara than among the Tuareg.

231 136 Donkeys vary less in colour than other domestic animals among the Tuareg. It is interesting to note in this connection that there are fairly big herds of wild donkeys, or asses, in the mountainous massifs of Ahaggar, Tasilé-n-Ajjer, and Ayr. These animals are generally greyish like most domestic donkeys.

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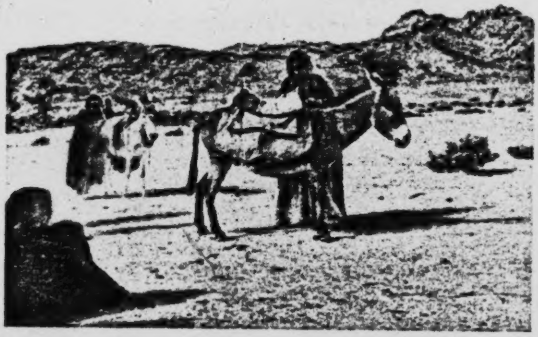

Fig. 83. Women carrying cereals in skin bags loaded on donkeys. Ahaggar, the *Dag Ŗali* tribe.

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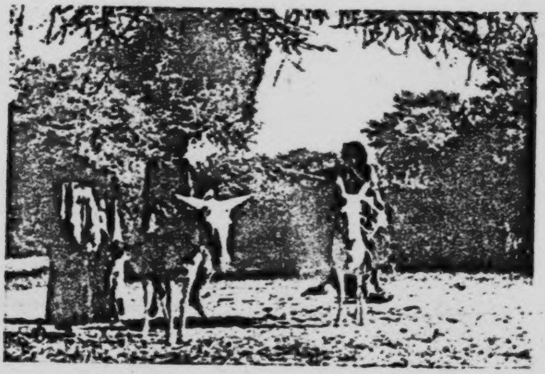

Fig. 84. Boy and woman mounted on donkeys. Ayr, the *Imezzureg* tribe.

But the wild animals are bigger, which the Tuareg ascribe to the fact that they roam freely in the desert 231
and always can find the very best fodder – an explanation which seems reasonable as the Tuareg 136
camp where fodder is reserved to their milk-yielding animals (cf. p. 491 ff.). It can be added that 231
domestic donkeys are frequently tightly hobbled by means of a narrow rope (*téffart*) around their forelegs (Fig. 45) and sometimes also with another rope (*am*[illegible]*hus* in Ahaggar) running from one foreleg to a hind leg.

If donkeys are not hobbled, there is always a great risk that they will disappear in the mountains and join the herds of wild animals. Unhobbled donkeys are often caught with great difficulty. They are sometimes driven together by the inhabitants of a camp, and when mares have foals it may even become necessary to run down the foals on riding camels in order to get hold of their mothers. In [312]
some regions where donkeys depend on water from deep wells it is customary not to give them too much water to drink, in which case unhobbled animals can always be caught at the well, where they will wait for water. But donkeys are very well fitted for desert life. They can do without water for several days even when weather is extremely hot, and where water is very near the surface so that the sandy soil is humid donkeys dig small holes with their hoofs to drink the water which quickly gathers in these depressions. I have myself witnessed this in Ahaggar where the Tuareg say that among domestic animals only donkeys are able to make such water-holes.

The Tuareg distinguish between the domestic donkey (*éyhed* in the north, *éyjed* among the Ayr Tuareg) and the wild donkey or ass (*ahulil* in the north, *émedrer* in Ayr), but they are well aware that there is no important distinction between them for many Tuareg even nowadays obtain domestic donkeys by catching wild animals. Wild donkeys or asses were hunted for domestication still more eagerly in the past, and there may perhaps be some connection between donkey-breeding and true hunting – that is hunting for meat. Nowadays the Tuareg never eat donkey's meat, nor do they utilize 231
the skin of these animals. But it is known that the Ahaggar Tuareg have eaten donkey's meat in periods 262
of hunger even fairly recently, and Duveyrier states that old animals caught in traps are killed for their 237

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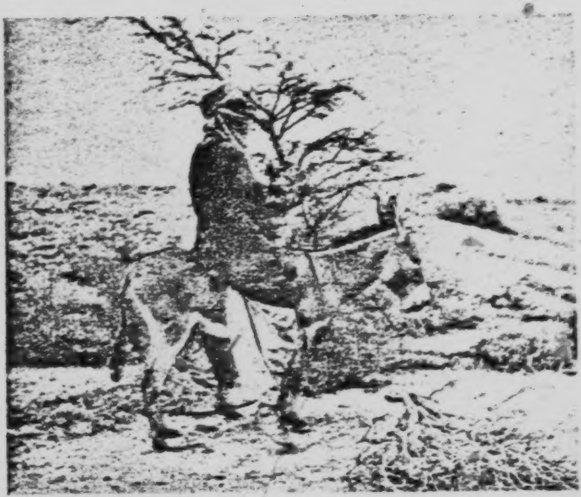

Fig. 85. Tuareg breaking in a young newly-caught donkey. The donkey is prevented from escaping by means of hobble-ropes (*téffart* and *amahus*) and is also tethered to an acacia tree. Ahaggar, the *Aǧuh-en-tehlé* tribe.

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262 skin (Duveyrier 1864, p. 231). It is most possible that the taboo on donkey's meat and skin is due to
237 Islam – meat of donkeys and horses is considered unlawful by the Ḳoran. Leo Africanus states that
[175] the nomads of the Sahara eat meat of donkeys which they catch in snares (Leo Africanus II, p. 944).

136 The wild donkeys, or asses, of Tuareg countries are very shy, and it is most impressive to watch a
224 herd of some twenty animals galloping over the desert plains. Because of their shyness they are often hunted much in the same way as game animals. Among the Northern Tuareg they are caught in the spiked wheel-trap, are run down by men mounted on camels, or are driven into closed river valleys surrounded by steep rocky walls. In certain parts of Ayr wild donkeys can be caught in the same way – notably in valleys of Mount Tamgak (Northern Ayr) and around Anu Meḳḳeren (Central Ayr) – while the method of running down wild donkeys with riding camels is said not to be practised. Whether the so-called spiked wheel-trap is used for catching donkeys or not, I do not know, as the Ayr country is very extensive and inhabited by Tuareg of different origins. The Tuareg belonging to the *Kel Ferwan* group claimed that it was not used for donkeys or asses for which they have a kind of snare called *turunt*, which is also the name used among them for the noosed rope connected with the spiked wheel-
[283] trap. The snare used for donkeys is said to consist of a rope some twenty or thirty metres long and plaited from dum palm leaves. The rope is noosed at one end to be used as follows:— The loop is laid out where donkeys come to drink, the whole rope being covered with sand. The hunter lies hidden behind some natural object, a rock or tree, and when a donkey puts one of its legs within the
[231] loop he pulls the rope. It is said that this method is also sometimes used for other domestic animals which have gone wild, as happens frequently with oxen. But it is never used for hunting proper game
231 animals such as gazelle, antelope, and barbary sheep. To catch domestic animals which have gone
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wild the Ayr Tuareg also know another type of snare, or rather lasso, which is also known as *turunt*. 231
It consists of a long rope noosed at one end, but the loop in this case is thrown against the animal 224
by means of a short forked stick. The *Kel Ferwan* Tuareg say that this type of lasso is not widely found [171]
among them, and claim it is typical of and traditional for the pastoral Fulani, who use it to catch cows which are difficult to approach.

The wild donkeys caught for domestication are young animals, for very old ones cannot be tamed. 231
When an animal is caught by one of the above mentioned methods it is beaten a heavy blow between the ears so that it falls unconicious to the ground. It is thereupon given a rope around its mouth, for wild donkeys are fierce and have a dangerous bite, and is also tied with ropes around its legs so that it cannot run. When the animal comes to after the blow it is led to the camp where it is tethered. It remains tethered and fitted with hobble-ropes in the camp for one or two months during which period it gets a very brutal treatment. It is trained for riding by the men who mount it daily during [492]*
this period of training (cf. Fig. 85) until it can be ridden as freely as domestic donkeys. The Tuareg say that not all donkeys survive the heavy blow on the head but that most of them do.

Donkeys constitute the important riding animal of all vassal women, and there are also some men 492*
of the true vassal class who ride donkeys though most of them have riding camels. Donkeys are also [562]
extremely important pack-animals. They are used by most Tuareg for the transportation of tents and [565]

[283]

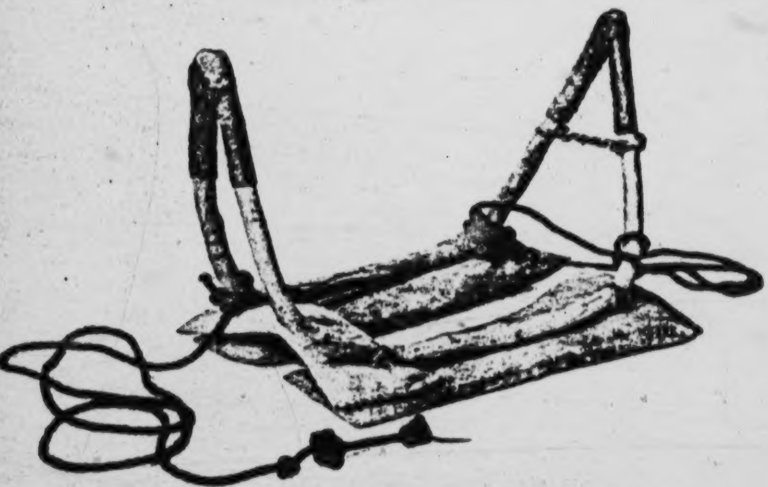

Fig. 86. Donkey saddle (*aruka*) of the type described in detail in the text (cf. p. 110). It is fixed to the animal by two cords of goat's hair: the girth (left), the cord passing under the tail (right). Ahaggar, the *Dag Ṛali* tribe. Dimension: 0.585 m long, 0.360 broad. (N.M. G. 5246).

*492 household goods during nomadic migrations, and are employed daily in all camps to carry water in skin-bags
[415] from wells and waterholes to the tents. They are very strong animals considering their low stature,
[312] and good pack-donkeys can carry up to one hundred kilograms even for very long trips. Donkeys
[262] are occasionally used for long journeys by the Northern Tuareg, and many Ayr Tuareg use them to
[484] fetch provisions of millet around Tanut in Damergu. Caravans of donkeys are frequently observed
in these regions, and one even sees mixed caravans of donkeys and camels. There can be no doubt
[174] that before the introduction of the camel the donkey was still more important for riding and transportation
than is the case nowadays. This is clearly demonstrated by historical material from Egypt and
adjacent regions (cf. Erman 1922, p. 518 f., 529, 592 f., 636).

231 It has already been mentioned that donkey's meat and skin are not utilized nowadays by the Tuareg.
[262] The same is true of mare's milk which, however, is used as a remedy against a kind of cough known
[257] to the Ayr Tuareg as *khamkham*. There is no regulation of mating for donkeys which in many ways
are semi-domesticated animals. In Ayr male donkeys are never castrated, while the Ahaggar Tuareg
say they castrate such stallions as constantly run after the mares and in this way cause too much
trouble. The Tuareg also have no methods to prevent foals from sucking, while a method of this kind
is sometimes applied by sedentary people in and around Agadez. This method known as *éfinjar* consists
in the cutting of the nostrils of half-grown foals so that they cannot suck pregnant mares. Both stallions
*492 and mares are used for riding and transportation, but female animals are much preferred for these
purposes. Mares are used almost exclusively for the transportation of water-bags hanging under the
animals, as the bags might be squirted by stallions' urine.

The Northern Tuareg saddle their donkeys, using the same saddle type for riding and for transportation
[462] (Fig. 86). This is known as *aruku* and is manufactured by the women in the following way:—
[824] Two fresh boughs of the *tahunek*-tree (*Rhus oxyacantha*) are heated, or slightly burned, over the fire.
[322] The boughs are thereupon barked and bent into the curved form wanted, and are then kept in this
position by cords. After drying for a few days the boughs will retain their curved form, and the cords
[237] are untied. The boughs are then cut up and their ends are connected by two pieces of camel's hide
[412] soaked in water, and sewn together by means of a large iron needle (*tasugla*, or *tasubla*) (cf. Fig. 220b)
and a thread which is also cut from camel's hide. The wooden saddle frame is attached to three
[237] cushions. These cushions are generally made of goat-skin or sheep-skin stuffed with hay or with date
palm bast, but may also be plaited from leaves of the date palm tree. Cushions made from goat-skin
[412] are sewn together with strips of the same material by means of the little awl known as *tistent* (cf.
Fig. 218a). The two long cushions resting lengthwise upon the animals back are known as *tastek*,
and the small cushion resting over the animal's back close to its shoulders is called *tafelledut*. The
saddle is fixed to the donkey by two girths consisting of cords made of goat-hair. One of these cords
(*tidmechart*) passes under the tail, the other (*ahayif*) is tied around the chest of the animal. This saddle
type is well fitted for the transportation of burdens and in particular of water-bags, the cords of which
are attached to the pommels. When the saddle is used for riding it is frequently covered with a blanket
or a piece of cloth. Saddles of this type are found in all camps of the Northern Tuareg, and Lhote
states that they are also found in Adrar-n-Foras and in Ayr (Lhote 1947a, p. 120). This may be so
but I have myself never seen them in the latter region where they are unknown to the *Kel Ferwan*

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*492 **Tuareg.** Some Ayr Tuareg use a kind of saddle for the transportation of water-bags. It consists of two pieces of wood with grooves to support the cords of the water-bags; it corresponds to the type of saddle described and depicted by Lhote from the *Iullemmeden* (Lhote 1947a, p. 114, 134) which type I have seen also among the *Kel Tahabanat* of the *Kel Ataram* group. However, most Ayr Tuareg do not employ this device. They content themselves with a layer of thin green twigs placed on the donkey's back so that the cords of the water-bag, which hangs under the animal's belly, shall not hurt and gall.
T
[494] This method is also sometimes used by Northern Tuareg. To transport the tent and its belongings during nomadic migrations, the Ayr Tuareg use one or two rolled-up mats of the tent-covering for saddle, while on trading expeditions to Damergu they place their skin-bags filled with millet directly on the donkey's back. Such bags (*alelu*) may also serve as a kind of saddle for luggage. When the Ayr
T
Tuareg ride donkeys they sit on the naked back, on a blanket, or on a piece of matting. The Tuareg
[171] never use bridle, bit, or rein for riding as do some people of the northernmost parts of the desert and the Atlas. They control their donkeys with a short stick and constantly beat them over the neck to keep up their speed. I have never seen them prick the animal's neck with a spiked stick as is frequently done in the Atlas and adjacent regions. Here many donkeys wear iron shoes which are also unknown among the Tuareg.

HORSES

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231 Horses play a very small rôle with the Tuareg I have studied. There are very few horses in the Northern
[171] Sahara where they are bred mainly by sedentary people who are able to feed their animals on barley,
[565] millet, and other garden products. Some years ago there were a few horses in the noble *Kel Rela* tribe of Ahaggar, but nowadays there are no horses among pastoral Tuareg of this region, and in all Ahaggar

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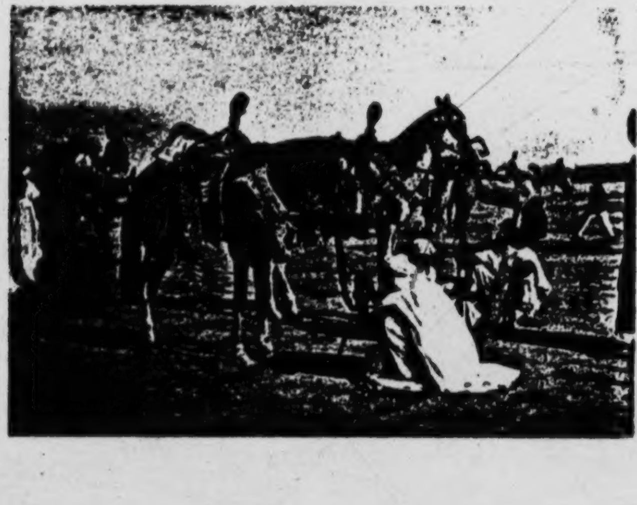

Fig. 87. Hausa Negroes with their richly ornamented riding horses. Ayr, the *Imeggadraw* of Agades.

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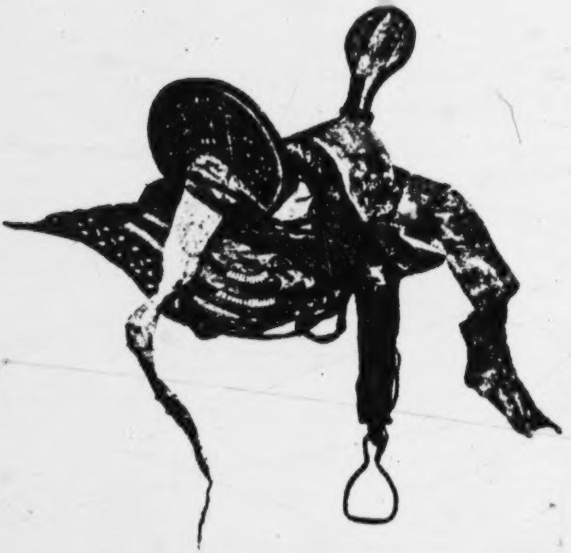

Fig. 88. Riding saddle of the type manufactured at Agadez and used by horse-riding Tuareg and Negroes in Ayr and further south. Note the very narrow stirrups which are often used for the insertion of only one or two toes. (Musée de l'homme, Collection Henri Lhote, 38/617).

231 there are perhaps less than ten horses which are all owned by sedentary people (blacksmiths and
[563] Arabs). Conditions for horse-breeding are better in Ayr, but even there pastoral Tuareg do not generally
breed horses which for a large part of the year must be fed on barley, millet, or on milk. In Ayr,
[563] horses are mainly bred by sedentary Tuareg of the *Kel Ewey* group and by the negroid citizens of
Agadez who hold horses in very great esteem. There are perhaps 100–200 horses in and around Agadez,
where the animals are kept in or at the houses most of the year to be fed on cereals and on hay of
annual grasses cut with a sickle (cf. Fig. 143 f). During the period of *akasa* it is common to let the
*492 animals graze on annual pasture, and they are then very tightly hobbled. The Ayr peoples use a bit
(*aṛaba*) (Fig. 89) similar to the type used by Arabs in the North, but their saddles are not of the
[171] general Arab type (cf. Fig. 88). The very broad Arab stirrups also seem to be unknown to the *Kel
Ayr* and to the *Kel Geres*, who have many horses. The stirrups used by horse-riding Tuareg are
generally very thin and slender, and they are frequently used for the insertion of only one or two toes.
[113] The riding-gear used by the *Kel Ayr* (including the *Imeggedezen*) and the *Kel Geres* is described in
detail in literature (cf. Foureau 1905, III, p. 879 ff. & 921 ff.). This is very complete, and was, perhaps,
[175] introduced fairly recently, for we know that the Libyans of Antiquity rode without a saddle and
governed their horses mainly by means of a stick (Bates 1941, p. 96 f.), and we are informed by Ibn
Batutah that in the Middles Ages the people of Ayr rode without saddles (Ibn Batutah IV, p. 442).

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174 The history of the horse in Africa constitutes a very important problem. It is generally admitted

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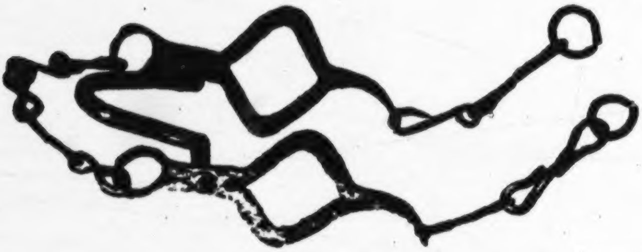

Fig. 89. Horse bit of iron. Made by blacksmith of Ayr, Agadez. Dimension: ca. 0.11 m broad. (N.M. G. 6667).

that the horse was introduced to Egypt with the Hyksos invasion about 1700 B.C. From Egypt it 231
spread to other African peoples, and it was common among the Libyans during the reign of Rameses 174
III (about 1200 B.C.). This first horse-breed introduced among the North African Berbers seems to have been of the pony type (cf. Bates 1914, p. 96 f.; Adametz 1920, p. 46 ff.; Antonius 1922, p. 284) which is still represented in Africa. I believe that the so-called Togo-pony which is found in scattered and isolated parts of the Western Sudan belongs to the old pony-breed, though this theory is not accepted by Doutressoulle on the ground that such ponies are not found nowadays in North Africa and Egypt (Doutressoulle 1947, p. 238). Doutressoulle has made a detailed study of the horse-breeds 231
of the area formerly known as French West-Africa. Apart from the pony-type just mentioned above, 171
there are three main types:— (1) the *Aryen type* known in Ayr as the Begzen horse. It is an Arab breed [114]
introduced from the North – from Tripolis according to tradition. Horses of this type are found scattered throughout Ayr, Adṛaṛ-n-Foṛas, and Hodh. (2) the *Barbe type* found mainly among the Moors west of Timbuktu. (3) *the Dongolawi type* mainly found to the east of the Niger (Doutressoulle 1947, p. 237 ff.).

Horses become valuable riding animals to many Tuareg living in the true savannah country. The 492*
Kel Geres Tuareg use horses for short riding trips though they prefer camels for riding on long journeys. They claim horses of the Begzen breed to be the very best riding animal. In the remote past when the 492*
horse was introduced into North Africa and the Sahara, horses may have been important also to 174
Libyans and Tuareg living further north in the desert, where the climate may then have been more favourable to horse-breeding than it is in modern times. Lhote has studied the ancient rock-pictures representing horses, horse-riders, and horse-drawn waggons in the Sahara, and he ascribes to the horse very great importance for the opening up of the desert country and invasions into these regions by fair-skinned Berbers (cf. Lhote 1953a). This theory is perhaps supported by the fact that the Ahaggar [192]
Tuareg though they do not breed horses have a fairly extensive vocabulary connected with horses and horse-breeding. Briggs states as his opinion that horses were probably never common in the Sahara (Briggs 1960, p. 21). This, of course, we cannot know, but it seems safe to say that in the Sahara the horse has never had the same economic value as the camel later has had.

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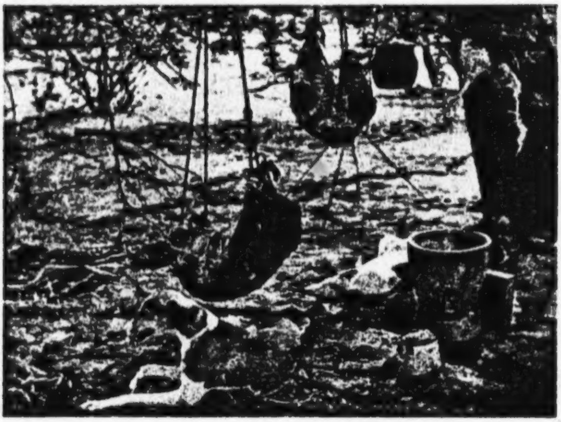

Fig. 90. Tuareg dogs of the breed which is common among the Ayr Tuareg. Dogs suffer much from heat in summer when they hide under water-bags. Ayr, the *Imerzureg* tribe.

DOGS

231 The Northern Tuareg distinguish between three types of dogs (sing. *eydi*) as follows:— (1) a long-haired breed (*aberhoh*); (2) a short-haired slender breed (*akhami*); (3) a very slender and elegantly [173] built greyhound (*oska*) (Fig. 91). The Ahaggar Tuareg speak of a tradition, according to which the greyhound (*oska*) was introduced fairly recently through contacts with the Northern Arabs. The Ayr Tuareg do not make similar distinctions between dog breeds. They have only one breed which is known as *ijji* (Fig. 90). It is short-haired and slenderly built though less so than the true Arab greyhound.

[136] Dogs are kept to guard the camp and in particular to protect the animals from the attack of jackals or hyenas during night. If the Tuareg had no dogs it would be most difficult for them to breed goats and sheep. Dogs may also follow the flocks in daytime to protect the animals against beasts of prey, though this is not generally considered necessary. Dogs are not trained as "sheep-dogs", but it is said that a few "intelligent" dogs will assist the herdsman in keeping the flock together during grazing, [224] and many dogs will drive away domestic animals which belong to foreign flocks. Some Tuareg use dogs in hunting barbary sheep, gazelle, antelope, and hare (cf. hunting, p. 159, 166).

[171] It is well-known that the Arabs consider the dog an unclean animal. This is also so among Arab nomads of the Sahara, but they do not consider their greyhounds unclean in this sense. Thus pastoralists of the Chamba group told me that among them a fine greyhound is esteemed in much the same way as are noble riding horses and camels. The Tuareg have very few true greyhounds and [521] I do not believe that they have this same feeling of interest in them. But many children and young [541] people are fond of all types of dogs, and one can hear them discuss the qualities of their animals and the daily dogfights which are considered a kind of entertainment to everybody in the camp.

the daily dogfights which are considered a kind of entertainment to everybody in the camp. Colour-terms are also used for dogs, and I have heard one Tuareg boy claim that he preferred dogs that were black and white. Adult people in general treat dogs differently, and they are frequently cruel to them which may be due to Islamic influence which is on the increase among the Tuareg. Though the Tuareg may be cruel to their dogs they acknowledge that they are very "wise and intelligent". They say that the dogs are much like humans with the exception that they cannot speak. Therefore they should also be fed like humans, and they are given millet-porridge – with milk if the yield is abundant. The Tuareg kill their old and superfluous dogs by hanging them from a tree in a noosed rope, and they consider this method very effective. 231 [177]

CATS

The domestic cat is found in many Tuareg camps. It is generally termed *muchch* which is Arabic by origin. I believe that domestic cats have been introduced to Tuareg countries later than the Arab invasions and that they have been introduced by the Arabs. This is in agreement with Lagercrantz's statement that domestic cats in most parts of North Africa outside of Egypt are post-Arabian (Lagercrantz 1950, p. 65). Cats are allowed to live in tents and huts, and are well treated as among the Arabs. The Tuareg keep cats not only for pets to their children, but they much like to have them in their camps as cats catch numerous scorpions and also attack snakes. [174] [136]

Among sedentary people of Ahaggar and particularly at Tamanṛaset the hedgehog (*ékenisi*, or *tékenisit*) is sometimes kept in the house or within the courtyard as it hunts beetles and scorpions during the night. This custom of keeping tame hedgehogs is no doubt recently adopted from Europeans living at Tamanṛaset. [177]

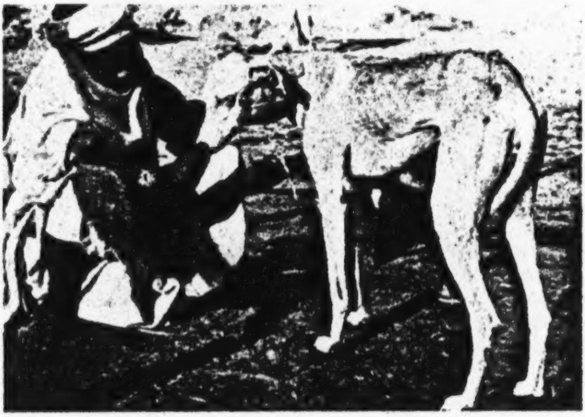

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Fig. 91. A true greyhound (*oska*) patted by a negroid agriculturist of the *Kel Ġanet*. Tasilé-n-Ajjer, the *Uraġen* tribe.

DOMESTIC BIRDS

235 Many sedentary people within Tuareg countries breed fowls of which a few may also be found in
pastoral camps of the Ayr Tuareg, though fowls seem to be of very little use to them. For the hens
kept by pastoralists do not hatch out their eggs, and these are not always found by the Tuareg. I think
that most pastoralists of Ayr keep fowls mainly because they like to have them walking around the
camp, and I believe that their owners in general are children. Domestic guinea fowls are bred by some
sedentary people of Agadez, and young Tuareg who find a guinea fowl chicken in the bush may even
[262] take it to the camp to keep it as a pet. In Ahaggar there are no fowls among pastoralists, many of
whom will refuse to eat fowls and their eggs (cf. p. 162).

Domestic pigeons are bred by some sedentary people living within Tuareg countries. I believe that
[174] they have been introduced by the Arabs – in accordance with the theory advanced by Stuhlmann and
Lagercrantz (cf. Lagercrantz 1950, p. 74).

Rationality and Beliefs in Stock-Breeding

Literature on so-called primitive pastoralists often states that these peoples are irrational stock- 121
breeders. It is said that they attach an enormous value to big flocks and herds which overgraze and
deteriorate pastures, that they take too little interest in selective breeding with the result that they
do not castrate their superfluous male animals or perform this operation too late, and that they take
an overwhelmingly large interest in the aesthetic qualities of their animals.

Tuareg stock-breeding is essentially rational and is well adopted to environment. This viewpoint 233*
can be proved by reference to the description of stock-breeding given in the preceding chapter. I have 232
here described in some detail the system used in the mating of sheep and goats, and how mating is
regulated in accordance with the development of pastures. From this description of mating regulations
it also appears that the Tuareg are not only interested in having large flocks. They also want flocks of
healthy and strong animals, and they generally kill or sell domestic animals before they grow barren.
It should be added that the Tuareg very well know that there is a limit to the number of animals (goats
and sheep), which can be herded in one and the same place. The Tuareg certainly want to be rich [356]
and to possess large flocks and herds, but they are also aware that there is a limit to size. Regarding
Tuareg interest in the aesthetic qualities of their animals, I have mentioned that it is mainly focused
on camels, and I have described in some detail the value attached to colours. It is clear, however,
that the Tuareg interest in their animals is not confined to the aesthetic. The true value of any domestic
animal is always judged rationally, and takes into consideration such qualities as age, build, stature,
and the like. The Tuareg also know that qualities of domestic animals are inherited and are aware 232
that it is necessary to have good breeding animals. Cauvet states that pastoral Tuareg attach very
little importance to the quality of she-camels used in breeding, while greatly interested in the build
and stature of bull-camels. In this, he says, the Tuareg differ from Arab pastoralists, who think that [171]
camel calves inherit their qualities mainly from the mother-camels (Cauvet 1925–26, I, p. 348). This [114]
statement, I believe, is not quite correctly expressed, for the Tuareg I have asked about this have stated
that a camel-calf inherits qualities from both parents and they have also stressed the necessity of having
good she-camels to produce the best possible calves. But most Tuareg have so few camels that they
are forced to mate all their she-camels. They cannot afford to select certain she-camels for breeding,
while it is easy for them to select one or two good bull-camels. All Tuareg I have asked admitted the
great value of selective breeding, and said that superflous rams and he-goats should be castrated or

232 [114] killed. This does not agree with Nicolas' statement that selective breeding is unknown among the *Iwllemmeden Kel Dennek* for all types of domestic animals (cf. Nicolas 1950a, p. 133).

Superfluous bull-camels are generally castrated very late – rarely before they are six or seven years old, and frequently much later. But this is not to say that all bull-camels are used in breeding, as those used for riding and transportation are generally hobled during grazing and copulation is thus effectively prevented. Bull-camels used in breeding are not always used for riding and pack animals, as they may be very savage and dangerous. In the rutting season they are left unhobled among the she-camels.

The Tuareg consider it best to castrate bull-camels late, and say that bull-camels if castrated at a very early age will not develop fully, or become such good riding and pack animals. Bull-camels which have not been allowed to mate are not so difficult to control during the periods when she-camels are on heat. Nevertheless, when bull-camels are castrated they become more docile. But to the Tuareg it is more important that gelded animals easily grow fat and thus acquire the strengh and endurance to enable them to perform the long and arduous expeditions connected with caravan trading and, in the past, also with raiding. In brief, castration of bull-camels is done as follows:— The legs of the animal to be operated are tied tightly with strong cords, and it is kept firmly to the ground by the weight of people sitting upon it. The operator thereupon cuts two slices in the animals scrotum and pulls out the testicles together with the spermatic cords. This must be done with great care because, it is said, the animal may die if one of the spermatic cords breaks. This method of castration by extraction is the only method used foı camels, and it may also be applied to other domestic animals such as bulls, rams, he-goats, and in Ahaggar also to donkey stallions. In the north this extraction method is known as *aselbi* while the *Kel Ferwan* Tuareg of Ayr use the word *azam*. The latter people claim that castration by means of cutting and extraction should be performed in spring (*tabsit*) or during the early rains (*akasa*), as the wounds will heal properly at these seasons. The other important castration method used among the Tuareg is that of chrushing the spermatic cords, it is known to the Ayr Tuareg as *éddaz*, and is never used for camels but is frequently applied to he-goats, rams, and [412] bulls. Chrushing of the spermatic cords is done by means of stones or pieces of wood – frequently by beating with the heavy wooden pestle of the large millet mortar (cf. Fig. 177). I believe that this method is that most commonly applied to he-goats and rams, and Tuareg of Ayr claim that they can use this method all the year round as it leaves no wounds to be healed. Rams and he-goats may be castrated at any age and even very old animals are castrated to make them fat for slaughtering. It is claimed that it is best to castrate superfluous lambs and kids very early, preferably as soon as they are weaned.

I believe that the examples given above confirm my statement that the Tuareg are mainly rationalists in their stock-breeding methods. To elucidate this in more detail I shall now present my material on Tuareg veterinary knowledge. This material is unfortunately not very precise because the Tuareg distinguish between very many stock-diseases, and the treatments applied can be studied scientifically [113] only by a veterinary surgeon. A description of stock-diseases is available for the northern parts of the Sahara ("Notice sur l'Institut Pasteur d'Algérie", I–II, 1934–1949), but there seems to be no particular study of Tuareg stock-diseases, which I know only by their Tuareg names. As I have not studied this [114] rather special subject in great detail, I supplement my own material with informations gathered from literature.

The most dangerous African cattle disease is the rinderpest. It is known to have entered Egypt in T 231
the year 1884 from the regions around the Black Sea, and about 1890, or somewhat later, it came to 171
Eastern Africa and to the Sudan. Rinderpest is nowadays widely found in Africa but it is rare or
unknown in Northern Tuareg countries. Rinderpest is apparently very rare in the Ayr Massif and it T
occurs mainly south of the Massif in savannah country. The Tuareg have no remedy against this 232
disease. It is stated by St. Croix that the Fulani of Northern Nigeria once deliberately exposed their F
cattle to mild rinderpest to make them immune from this disease in its more severe and dangerous 232
form. However, this method did not work and the Fulani gave up further experiments of this kind.
It is also mentioned by St. Croix that the Fulani practise a kind of vaccination against cattle pleuro-
pneumonia and that this is done as follows:— A piece of infected lung is put into milk for two to three
days and thereupon placed into a small opening cut under the nose-skin of the animal. The method T
is claimed to be effective (St. Croix 1944, p. 24 f.). Vaccination methods are also known to some of 232
the Southern Tuareg, e.g. the *Iwllemmeden*. These people vaccinate human beings against small-pox [751]
by inserting the pus of this disease into wounds cut with a knife (Aymard 1911, p. 108), and they also
vaccinate their cattle against cattle pleuro-pneumonia ("peripneumonie bovine"). They do this in much the same way as described above for the Fulani:— An infected piece of lung is placed in sour milk or in the soil for a few days, and is thereupon inserted under the skin of the forehead. Nicolas describes the method as dangerous because the infection attacks the whole forehead and also the nose-bone (Nicolas 1950a, p. 133), but two veterinary surgeons who practised among the *Iwllemmeden* of Tawa told me that they considered this kind of vaccination effective. The method is unknown among the Ayr Tuareg of the Massif where this contagious lung-disease is unknown or
very rare. T

I have no great knowledge of the contagious diseases in the Tuareg groups I have studied, but such 231
diseases seem to occur comparatively rarely, and there is no veterinary surgeon attached to the French 648
administration of Northern Tuareg countries. There is one veterinary surgeon in Agadez, but his most important field of work lies outside of the mountain massif to the south.

Among the *Kel Ferwan* Tuareg of Southern Ayr I have been told about two contagious diseases T 231
which, when they occur, may give rise to very heavy losses. One of these diseases is known to the T
Tuareg as *changa*. It attacks only cows, which die very quickly, but if cattle suffering from the disease [262]
are ritually killed their meat is nevertheless considered edible. One Tuareg told me that some years ago about thirty cattle of his camp died in one day from an attack of *changa*.

The other contagious disease I have recorded from Southern Ayr is called *tandert*. It attacks sheep T 233*
and goats, and I collected the following notes about it:— The blood penetrates the animal's flesh 262
which becomes quite red. If sheep or goats suffer from *tandert* and are ritually killed for eating, very 252
great care must be taken in the preparation of the meat. It must be boiled until it contains no blood, T
and must not be eaten until it is cold and dry. It is said that if these precautions are not taken the [753]
people who eat meat from animals suffering from *tandert* will themselves become attacked by the
disease, with the result that blood and pus may penetrate the skin at any part of the body. They say T
that a man who has eaten unboiled meat of an animal suffering from this disease with consequent 757
infection is treated in the following way:— A species of ant more venomous than the normal small

757 ants is collected and put into the millet mortar and pounded. The pounded mass of ants is then placed
164 on the affected individual at the spot where blood and pus have penetrated the skin. The disease is
characterized as very dangerous for human beings as blood and pus may emerge at any place of the
232 body, and can, for instance, destroy an eye. The Ayr Tuareg say that they have no remedy against
*233 *tandert* when it affects their sheep and goats. The disease *tandert* can hardly be anything but anthrax.
According to information from the veterinary surgeon Niels Grunnet much indicates that the contagious
disease *changa* is also anthrax.

*233 Foucauld has recorded a few contagious stock-diseases from Ahaggar:— *tarut*, a lung disease
231 affecting cattle, goats, and camels. The lungs are filled with pus, and the animals die in four to ten
days. *tehareṛet*, a disease attacking sheep and goats which will die with yellow entrails. *weñhet*, a
contagious disease attacking jackals, dogs and related animals which will die quickly. It is not the
true rabies. *talekmet*, apparently a kind of scrofula which affects the udders of female domestic animals.
These do not necessarily die from the disease but their udders may wither (Foucauld 1951–52, IV,
p. 1558, 1663, III, p. 1509, 1044). Dr. Grunnet has informed me that *tarut* could be the pulmonary
form of *pasteurellosis* also called *haemorrhagic septicaemia*, while *weñhet* may very well be distemper.
The *talekmet* disease according to Dr. Grunnet is not easy to identify by the present information, but
[232] three conditions are possible:— 1) cow pox, 2) *actinomycosis* of the udder, and 3) *mastitis*. The Ahaggar
Tuareg, like the Ayr Tuareg, do not seem to have any remedies against such contagious diseases which
incidentally are rare. But there are many other stock-diseases and treatments for them.

*233 The Ayr Tuareg have mentioned to me about thirty different names of camel diseases. The descrip-
232 tion of these diseases was frequently difficult to understand, and I noted only the following names:—

azni, that is a disease of congestion due to heat-apoplexy which is cured by bleeding with a knife or with tobacco powder put into the camel's eyes.

tadanak, an eye disease cured by cutting around the eyes and by the insertion of salt.

ichilchal, a nose disease cured in the following way:— The handle of a wooden spoon is put up through the nostril to pierce the septum, and heated butter is poured into the animal's nose.

inefdan, a diseases which gives the camel a swollen and inflamed head. A cure is effected by cutting with a knife and by burning.

toza, a kind of chill which causes pregnant she-camels to miscarry. There is no good remedy for it, but it is normal practice to pour water over the affected animal.

lejwad, a paralysis of the hind thighs of camels. The affected animals cannot stand up. The only remedy is a very difficult operation:— A vein is opened in the hind thigs to let out a great quantity of blood. Bleeding is stopped again by sewing together the cuts, which are finally treated with fire.

tibayaḳ, a disease which prevents the pregnancy of mated she-camels. The remedy for this consists in cutting slices around the vagina and under the tail so that blood flows. After this operation, which I have frequently attended, it is said that she-camels will become pregnant when mated.

sanes, a disease which prevents the pregnancy of she-camels. It is treated by putting the hand and the arm deeply into the anus of the camel. I have seen it performed once, and in this particular case the she-camel became pregnant shortly afterwards. According to Dr. Grunnet this disease is very probably *corpus luteum* which is squezeed out of the ovary by the manipulation.

A chest disease for which the Ayr Tuareg have no particular name. It is cured by cutting two rows 233*
of small slices through the animal's skin at both sides of the fore thighs so that blood flows. 232

awaras, that is swelling of the foot caused by an acacia-thorn or other pointed object. The remedy is to remove the thorn by means of knife and awl and then burn the upper side of the foot with a red-hot iron.

tafadé, that is wounds on the camel's back caused by galling of the saddle and the loads. Very many camels have such wounds which are treated by pressing out the pus, by cutting, and by burning.

ajawad, that is scabies (*Sarcoptes scabiei* var. *Cameli*) which is extremely common. The Tuareg living around Agadez treat it in two distinct ways:— (1) an animal bone is crushed in a large mortar and the pounded mass is put into a cooking pot to be heated over the fire. A black liquid with a consistency like that of liquid butter comes out of the bone-substance after heating. It is rubbed into the skin of the infected animal. (2) Fruit of the *aboraķ* tree (*Balanites aegyptiaca*) are put into a cooking [824]
pot to be heated over the fire. A black liquid comes out of the fruits after heating. This is rubbed into the skin.

Camels in Africa are considered to suffer from only three major infectious diseases (*anthrax*, 233*
pasteurellosis, *trypanosomiasis*), but several types of local infections can be met with.

I believe that camel diseases of Ayr and Ahaggar are not very different, but I have not collected [114]
much material on the subject in the north. I give a few additional examples from Ahaggar: *addeṛ*, that is a bunion close to the junction of leg and body of camels. The bunion is produced by rubbing of the fore thigh against the chest during walking, and some camels suffer from such bunions during long journeys. I do not know if there is any treatment for it. *ġelek*, that is the swelling of camels which have drunk too much water after the consumption of salty plants; this swelling disappears by itself.
iṛelenṛwahen, a nose disease which attack camels and goats. The nostrils are filled with pus so that 233*
the animals have difficulty in breathing. The treatment is burning. *ameṛwas*, swelling of the feet which 232
are washed with hot water. *toẓa*, a chest disease considered contagious. The animals lose their appetite. The remedy is burning. Dr. Grunnet thinks that it could be an oedematous form of *pasteurellosis*
(*haemorrhagic septicaemia*). – For scabies the Ahaggar Tuareg seem to know several treatments. They 232
use pounded leaves of *ahoyyaṛ* (*Cleome arabica*) and of *telulut* (*Capparis spinosa*) added to sour milk 824
and rubbed into the camel's skin. According to Maire, who has made use of information from Voinot, there are other treatments for scabies, namely the use of ashes of the *aferegak* plant (*Chrozophora Brocchiana*), tar extracted from the *aẓawa* tree (*Tamarix gallica* ssp. *nilotica*), charcoal of *turha* (*Calotropis procera*) which is pounded and mixed with butter, seeds of *teġellet* (*Colocynthis vulgaris*) which are boiled into a black oil called *akaha* (cf. Maire 1933, p. 145, 156, 172, 200). Congestion due to heat-apoplexy (*ahni*) is cured as mentioned in the case of the Ayr Tuareg.

From the above description of camel diseases and their treatment it will be seen that the Tuareg 232
know several types of veterinary methods. In brief the veterinary techniques can be summarized under the following five items:—

(1) Treatment by the hand, e.g., *Corpus luteum* which is squeezed out of the ovary by the mani- [257]
pulation (cf. *sanes*, p. 120), and massage treatments which the Tuareg practise with human beings and with domestic animals.

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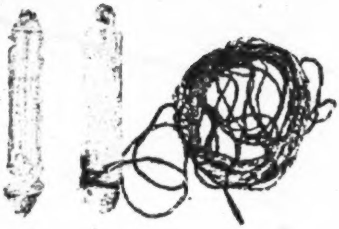

Fig. 92. Wooden splints (*tafasast*, pl. *tifesasin*) applied to broken legs of sheep and goats by means of a long thin cord of goat's hair. Ahaggar, the *Dag Ṛali* tribe. Dimensions of wooden splints: about 0.12 m. (F.M. 282).

232 (2) Operation with a knife. Such operations are often very simple. Thus I have once seen sheep with swollen throats and ears which were scratched with a knife to let out some water-like pus, but I do not know the name of this disease. The knife is used for many different operations some of which have been mentioned above. It is also used for bleeding which plays a great part in Tuareg veterinary 757 practise. Bleeding is applied to humans and to domestic animals as a treatment for various diseases. 753 The Tuareg may bleed individuals and animals bitten by snakes or stung by scorpions, but bleeding is used for many different diseases, as the Tuareg believe that these can be removed away with bad blood which is considered their cause. Bleeding is practised with camels. Thus in summer camels are frequently bled because they get slow and tired owing to *azni* (*ahni*), that is congestion due to heat-apoplexy, and a she-camel will normally be bled two or three hours after it has brought forth a calf. I frequently attended the bleeding of camels among the Ayr Tuareg where the method is as follows:— The camel is forced to stand upright while its head is turned downwards by a man (or a woman) who grasps the head firmly at the upper lip with one hand and pulls at a rope fixed to the animal's lower jaw with the other. A rope is tied around the camel's neck close to its chest so that the neck vein can contain as much blood as possible. The neck vein in this way will swell with blood particularly close to the animal's head at a place known to the Tuareg as *abayoṛ*. A slice about two centimetres long is cut in this place with a small sharp knife, and immediately blood will flow from the neck vein in a thin but powerful squirt. Shortly after bleeding has started the rope tied around the animal's neck is loosened, but blood is allowed to flow for several minutes, and I believe that at least two or three litres of blood is tapped. When the operation is to end the animal's head is raised, the skin around the wound is pressed together with two fingers, and bleeding immediately ceases. Once blood has started to flow from the camel it does not protest at the operation which is illustrated by the photograph Fig. 93. When a camel has been bled it will normally rest for a few hours before it starts eating again. When Tuareg get lost in the desert and lack water, they bleed their camels and

When Tuareg get lost in the desert and lack water, they bleed their camels and 261
drink the blood (cf. p. 235). In situations of great distress they may also kill their camels in order to obtain the water supply conserved in the animal's stomach.

(3) Treatment by burning. Wounds are cauterized by means of a redhot iron known as *tamaḳ* 232 (Ayr), or *taterkemt* (Ahaggar). Burning with a redhot iron is also practised for camels with swollen feet as already described (p. 121). It is also common to burn a line around wounds or other sites of disease in order that it shall not spread, and burning is even practised for internal diseases, as is the case with the *toẓa*-disease of camels (p. 121). Redhot irons are, on the whole, used particularly for camels. Wounds of sheep and goats, e.g., wounds from jackal bites, are cauterized by means of glowing camel dung. Certain stomach diseases, such as types of tympanites, are cured by a bunch of flaming grass swept under the animal's belly. I have seen this practised with donkeys which, like horses, may suffer from a kind of tympanites known in Ahaggar as *tahagd*.

(4) Instruments and bandages. Enema should be mentioned under this heading. It is known in 232
Ahaggar as *sebeǧiwen*, and is applied to humans and to animals by means of a funnel or by a special 757
apparatus made from a piece of hollow cane connected with a skin-bag. I never had the opportunity [113]
to see this apparatus, which is depicted by Lhote who also gives some information about the use of enemas with human beings (Lhote 1955a, p. 303, Fig. 36). He mentions that an enema is also given by a mother to her little children by blowing water into the anus with her mouth. I have seen this done to children in Ahaggar, but I do not know whether this method is practised with animals also. Both in Ahaggar and in Ayr the Tuareg apply wooden splints to their domestic animals with broken 232
legs. I have seen this device only in Ahaggar where wooden splints are known as *tifesasin* (sing. *tafasast*). They are used for sheep and goats (Fig. 92), and, by the sedentary agriculturists, also for cows. The wooden splints applied to goats are sometimes replaced by a leather bandage solidly tied [237]
around the broken leg. I mention under this heading that camels bred and born in stony or mountainous 492
countries cannot always stand the long journeys through plain and sandy deserts. Their feet suffer

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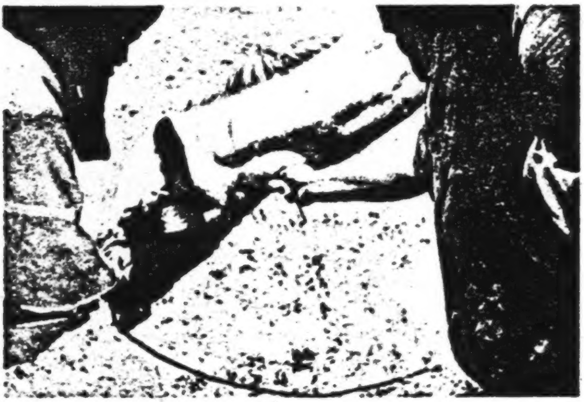

Fig. 93. Tuareg bleeding a camel at the place of the neck vein known as *abayor*. Ayr, the *Imezzureg* tribe.

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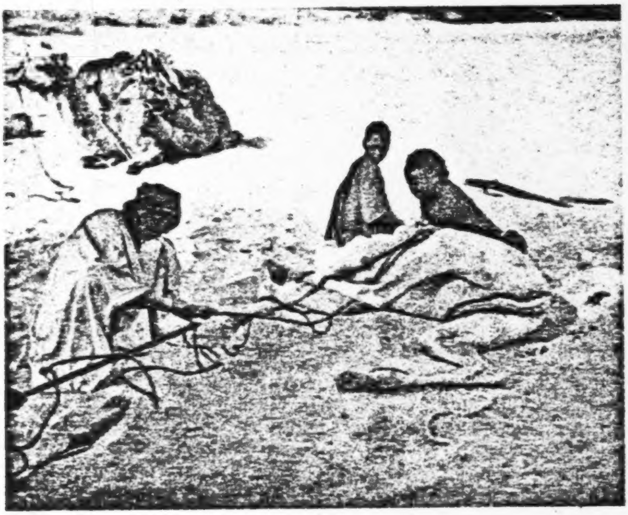

Fig. 94. Tuareg operating a camel's foreleg with a knife. Northern Ayr, the *Kel Tédalé*.

492 from the constant friction against the sand, and it may become necessary to provide the animals with leather shoes, that is pieces of ox-skin sewn around the hoofs. These leather shoes are known to [113] the Ahaggar Tuareg as *tissal* (sing. *tasselt*). Their appearance is excellently depicted by Lhote (Lhote 1951 b, photographs p. 224).

232 824 (5) Medical treatment which forms an important part of Tuareg veterinary knowledge. I have mentioned in the description of camel diseases the use of certain plants for the external treatment of scabies. The Tuareg also use various plants for drugs. Seeds of certain annual plants are mixed with milk and given to goats and sheep which suffer from stomach-diseases. Leaves of various plants are also considered laxatives. The Tuareg know many drugs made from wild plants, and they are aware that there are several wild plants that are dangerous to domestic animals. A very dangerous venomous plant is *élel* (*Nerium oleander*) which is extremely common in the higher parts of Ahaggar. It contains a kind of strychnine, and camels which eat *Nerium* leaves will die from this poison. The Tuareg say that camels bred and born in Ahaggar know the plant to be dangerous. These camels do not eat the *Nerium* leaves but others introduced to Ahaggar from the south may do so. To prevent camels from eating *Nerium* leaves the Tuareg put a leaf of the plant into their nostrils, or burn *Nerium* leaves so that the smoke and the scent of the plant enter the animal's nostrils. In this way camels come to loathe it. There are, according to Foucauld, other venomous plants in Ahaggar, e.g. *awrheḍ* (*Perralderia coronopifolia*), *arenkeḍ* (*Leptadenia heterophylla*, and/or *Cocculus pendulus*) which are fatal to goats and sheep (cf. Foucauld 1951–52, III, p. 1524 & IV, p. 1647; Maire 1933, p. 230, 236). The species [682] known to the Ahaggar Tuareg as *éfelehleh* (*Hyoscyamus muticus* ssp. *falezlez*) is very venomous for human beings, and in the past was used by the Tuareg to poison their enemies.

human beings, and in the past was used by the Tuareg to poision their enemies. However, this plant 232
does not seem to be venomous for domestic animals which grow fat from eating it (cf. Maire 1933, 824
p. 192). One plant (*téherégg̃elé*) (*Artemisia judaica*) is said to have an intermediate position: When
camels eat its green shoots they may contract entrail diseases, but the plant is also considered a remedy
for entrail worms. Domestic animals which have eaten venomious plants are generally treated with
liquid butter which is poured into their mouths. Venomous animals are also very dangerous for do- 232
mestic animals, notably scorpions and snakes which abound everywhere. The treatment of swollen 825
limbs caused by snake bites or scorpion stings is sometimes bleeding, but the Northern Tuareg also
consider it effective to give the affected animal fat from a female barbary sheep and to place a little
fat over the place where the animal has been bitten or stung. Under this heading of veterinary medicine 232
mention must finally be made of the fact that tobacco is considered to possess curative qualities in
the case of certain diseases. When camels get tired and slow owing to congestion during the hot summer
season the Tuareg consider it an excellent remedy to put, as mentioned above, powdered tobacco
leaves in the animals' eyes. This was frequently practised with my own camels, and it seems to me
that the method is efficacious.

It is evident that many veterinary methods among those mentioned above are effective, and I believe 232
that Tuareg veterinary methods are largely to be considered rational. It is a true that it is most difficult 114
for an anthropologist without any veterinary training to judge objectively the value of all treatments
of stock-diseases. But French veterinary surgeons I consulted at Agadez held the view that the Tuareg
methods they knew of were effective, though in specific cases of disease they could do better than the
Tuareg, and one veterinary surgeon admitted that the Tuareg knew far more about camel-diseases
than did modern veterinaries. It can be added that the Tuareg possess an anatomical knowledge of 231
their animals which is no less than astonishing. Apoggi has noted 43 terms used by the Tuareg of 815
Tasilé-n-Ajjer to describe the exterior parts of a camel (Apoggi 1933), and this list is not complete. [192]
It goes without saying that the Tuareg also have a large vocabulary for internal organs which they
know in detail from slaughtering. And I believe they have a fairly good knowledge of physiology.

I have elsewhere given some information of Tuareg medical methods applied to human beings 75
(Nicolaisen 1961; cf. also Humann 1933), and I have stated that Tuareg medicine cannot be under- [113]
stood entirely without reference to religious and magic beliefs. This is to some extent also true of
their veterinary methods. But as far as I know there are many medical methods based on magic and
religious ideas which are applied solely to human beings. This may seem quite natural.

Domestic animals may run the risk of being attacked by evil forces such as the evil eye and the evil 231
mouth (*tehot* in Ahaggar; *tugarchet* in Ayr), the *Kel Asuf* spirits, and the mystic power known as 754
ettama or *tezma* in Ayr (cf. p. 21), and valuable animals may carry Islamic amulets as a protection 751
against these evils. I have seen such amulets carried by a few rams and he-goats, but they are used 233*
particularly for camels, and I believe that most camel amulets are meant to protect the animals [751]
from the evil eye (the evil mouth). Against this malignant force camels may also be provided with a [754]
donkey's hoof hung around the neck as an amulet. Another non-Islamic amulette is used for riding [772]
camels in Ayr:— Some Tuareg of this region hang the foot of a turtle around the camel's neck in order [825]
that their riding animal may not stumble.

778 Religious beliefs also interfere with Tuareg stock-breeding and create usages of an irrational kind.
231 Thus the Tuareg, like other North African peoples, firmly believe in the mystic benevolent power,
171 or benediction, known as *elbaraka*. This is a power that emenates from God. It is given by God to
784 man and it cannot act unless certain taboos, or rather religious prescriptions, are followed. The bene-
783 diction *elbaraka* is more than anything else hurt by impurity. Cleanness is an absolute necessity for
this good force to be sustained in the same way that a man cannot approach God through prayer if
841 he be unclean. Women are considered unclean during their periods of menstruation and cannot, there-
262 fore, then pray to God. They are also forbidden to drink the milk of domestic animals which have very
young kids, lambs, or calves, and they must not drink water which has been conserved in newly-
made skin-bags. These taboos are maintained in order not to hurt the benediction given the animals
778 by bringing it into contact with impurity. For the same reason milk taken from animals which have
784 recently brought forth young should not be given to strangers – they might be unclean and harm the
234 *elbaraka*. It is also believed that soil is an impurity dangerous to *elbaraka*, and milk must never be
spilt on the ground. Even when milk-bowls are cleaned with water, this liquid should be poured out
upon plants or stones, and never be spilt on the ground. Should this be done, God will withdraw his
elbaraka and the result will be severe periods of drought without milk. I have frequently heard Tuareg
ascribe the lack of rain and the dry pasture – the lack of *elbaraka* – to the fact that somebody had spilt
milk upon the ground. This had caused God to be angry and to withdraw his benediction. Some Tuareg
have also said that *elbaraka* is harmed by a person who blows upon milk. When a man drinks milk
he must not blow away impurities before drinking but must remove them by means of a piece of straw.
*233 In the two groups of Northern Tuareg and also in Ayr it is considered very disgraceful for a person
577 who watches the animals away from camp to drink milk directly from an animal's udder. Some Tuareg
272 say that a man when staying alone among milk-yielding animals should not utilize their milk even if
he performs milking in the usual way. A person who breaks these rules is called *émenkes* or *émelded*
among the Ahaggar Tuareg, *émelded* in Ayr. The Tuareg say that there are some people, and in
particular many slaves, who do not follow this rule, and that they are despised if known to have
broken it. When two or more people are alone with a herd or flock away from the camp they can
freely utilize the animals' milk. And it is very normal for camel herdsmen to live with a herd of she-
camels in isolated places for long periods. They then live almost exclusively on camel's milk taken
from the herd they guard.

272 Certain usages connected with stock-breeding are rationally explained by the Tuareg. Thus when
they heat milk by means of hot stones (cf. p. 221) put into the milking bowl, they claim that this is
done in order that the milk shall not get dirty as would happen were it heated in an ordinary cooking
272 pot. Another custom which by other stock-breeders has been explained as being based upon magic,
262 namely the usage not to drink milk and eat meat at the same time, is also rationally explained by the
Tuareg. They say that there is no taboo on taking these kinds of food together, but it is very unwise
to do so because the mixture will act as a laxative and upset the stomach. Therefore, if a Tuareg has
drunk much milk he will not eat meat shortly afterwards, and if he has eaten meat he will not take
milk for some hours, though he may do so should ample water have been added to the milk. The
*233 234 Tuareg to my knowledge have no other special customs in connection with stock-breeding and milk
than those mentioned

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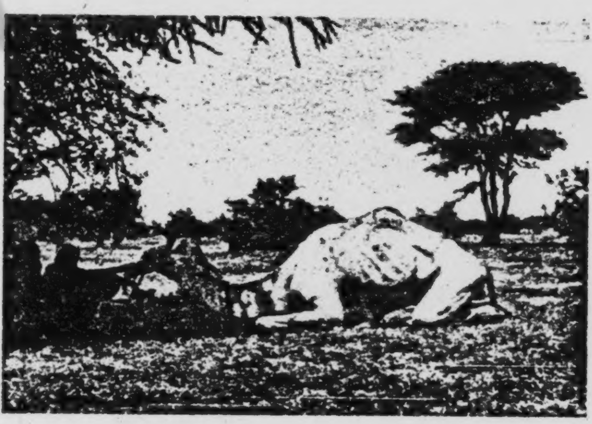

Fig. 95. A Tuareg feeding his riding camel with *afezu* grass (*Panicum turgidum*). Many Tuareg feed their riding animals with stems of this perennial grass – partly to obtain a docile camel for riding, partly to change its fodder which consists largely of acacias and annual plants. The photograph is taken near Agadez at the *akasa* season. Annual plants grow between trees and bushes (*afagag*, *Acacia Raddiana*; *ébezgin*, *Salvadora persica*; *tadent*, *Boscia senegalensis*). Ayr, the *Isakaranan* tribe.

234 than those mentioned. Thus they can use any kind of receptacle for milk and milking, and they do
416 not clean their milk-bowls with urine as is normal among certain East African stock-breeders, and,
237 perhaps, also among certain of the Fulani living south of Ayr. The taste of urine is detested by the
262 Tuareg, who know this taste all too well as the water drawn from pools and wells is frequently flavoured
237 with urine and the excrement of domestic animals. Nor is camel urine used by Tuareg women for
302 hairdressing as is done among the Arabs, but it is said that it may have a medical value in curing
752 wounds. The custom of drinking blood has been mentioned above (p. 122 f.) and will be described
later (p. 235).

*233 The Tuareg apparently have comparatively few superstitious usages in stock-breeding, which is
232 mainly to be considered rational. We have seen that stock-breeding is adapted to environment, and
we have also mentioned that there are veterinary methods which doubtless have their origin in considerable knowledge of the anatomy and physiology of domestic animals. This knowledge forms one
corner-stone of rational stock-breeding, and another is the very detailed knowledge of botany. In
*233
824 Ahaggar there are more than 600 different plant species for which the Tuareg have particular names,
though a few related species are sometimes known by one and the same name. Every Tuareg know about the ecological conditions of these plants, and he knows exactly their fodder value for domestic animals. He knows that certain plants form excellent fodder for all domestic animals, but he is also well aware that the different types of stock have different needs, so that certain plant species are valuable for camels, other species for other domestic animals.

231 The Tuareg are occasionally cruel to donkeys, and to dogs, but they take the greatest care of all
other domestic animals to ensure their wellbeing and reproduction. Women bring acacia pods or
484 tender annual plants to kids, lambs, and calves, and to sick animals which remain in the camp. On
*233 long trading expeditions, when the camels have little time for grazing, some Tuareg will walk along

484 *233 the caravan and feed the animals with annual grasses, and a camel-rider, when he meets plants considered excellent for fodder, will stop for a while to let his riding camel eat them.

*233 824 Saliferous plants are highly important to all types of livestock, and camels and sheep in particular need much salt nourishment. In Ahaggar there are certain plants of this kind almost everywhere, and the following species serve as fodder:— *aramas* (*Atriplex Halimus*), *issin* (*Salsola foetida*), *tabarekkat* (*Tamarix aphylla*), and *aẓawa* (*Tamarix gallica* and related species). *Aramas* in particular is very important. It is found almost everywhere within the Ahaggar Massif and at all altitudes. Benhazera states that *aramas* forms the most important fodder plant of Ahaggar (Benhazera 1908, p. 65), but this is not quite correct. It is most important because of its salt content as domestic animals do not thrive without salt, but the saliferous plants mentioned are very little nourishing for most domestic animals, and if the animals constantly eat such plants they become very thin. The most nourishing fodder plants of Ahaggar are tender annual species which spring up after abundant rainfalls. These plants are collectively known to the Ahaggar Tuareg as *akasa*; they comprise many different species and those considered most excellent for fodder are: *taġeruft* (*Tribulus terrester*), *aḍreylal* (*Astragalus* sp.), *taynast* (*Echium humile*), *aẓren* (*Monsonia heliotropioides* & *M. nivea*), *tamaghé* (*Moricandia arvensis*), and *tanesmimt* (*Rumex vesicarius* & *R. roseus*). To these annual fodder plants can be added another important annual species, namely *alẉat* (*Schouwia purpurea* ssp. *Schimperi*) which grows in the lower parts of Northern Tuareg countries. It is apparently not so common and important to the Northern Tuareg who live in and around the mountainous massifs, though it is a common and very valuable fodder for domestic animals of the Ahaggar Tuareg who live towards the south in the plains of Tamesna. It is one of the best fodder plants for camels and is also fairly good for sheep, [132] while less valuable for other types of livestock. Annual plants may germinate over a large part of the year in Ahaggar, but as rainfall is most common late in summer (June, July, August) the best annual pasture will spring up at this period, and under very favourable conditions the plants may keep fresh and green for up to four months. When annual plants wither they are known to the Ahaggar Tuareg as *ṭarat* (*ṭarat n akasa*). Such dry annual plants have lost much of their fodder value, but they are important for fodder even at this stage. The perennial species which are most important for fodder have their optimal value at particular stages of their development at particular seasons. Important are the perennial grasses known to the Tuareg as *tullult* (*Aristida pungens*) and *afeẓu* (*Panicum turgidum*). The *tullult* grass is extremely common in the Northern Sahara, and it forms perhaps the basic fodder plant among the Tuareg of Tasilé-n-Ajjer. It is also common in Ahnet and in the other mountain massifs surrounding Ahaggar to the north, but it is not found in the mountain massif proper of Ahaggar where most Tuareg live. The grass grows at Abalessa where cattle, goats, and sheep of the sedentary farmers feed upon it. The *tullult* grass is valuable when green in winter, and hay of this [484] grass is used for camel fodder on caravan expeditions to Tidikelt. The Tuareg cut it with a sickle and [137] take it with them on the journey to the northern oases, because there is normally little vegetation on the road and no pasture around the oases where the Tuareg remain to trade for several days. The *afeẓu* grass is extremely common in the lower parts of Ahaggar and is found in practically all river valleys. It is valuable for fodder when green after rain, but it is of little value when withered. There are other perennial herbs and grasses which are eaten by domestic animals, but herbs and grasses are not the most important perennial fodder plants for goats and camels as the very best fodder plants 233* of this kind are acacia trees, notably the species of *tamat* (*Acacia seyal*) and *abseṛ* (*Acacia Raddiana*) 824 which are, perhaps, the most common trees in the lower parts of the Ahaggar Massif. In Ahaggar the acacias defoliate in winter, and they are then not very nourishing fodder, though they do not apparently loose all leaves at one and the same time. Very nourishing are the fruits or pods of the two acacia species mentioned. They are eaten by all domestic animals.

The most valuable fodder plants in Ahaggar consist of annual plants and the acacias, with the addition of saliferous plants. The tender annual plants are those considered most nourishing for animals. The annual plants may spring up everywhere at all altitudes, but the three vegetational zones of [137] Ahaggar do not possess exactly the same species, and there are still greater distinctions between the perennial species found within these zones, which as fodder areas have the following main characteristics:—

(1) *Abada*

Annual fodder-plants	*tageruft* (*Tribulus terrester*)
	taynast (*Echium humile*)
	aḍreylal (*Astragalus* sp.)
Perennial fodder-plants	*tullult* (*Aristida pungens*)
	afeẓu (*Panicum turgidum*)
	abseṛ (*Acacia Raddiana*)
	tamat (*Acacia seyal*)
Saliferous plants	*aramas* (*Atriplex Halimus*)
	issin (*Salsola foetida*)
	tabarekkat (*Tamarix aphylla*)
	aẓawa (*Tamarix gallica* and related species)

(2) *Tarayin*

Annual fodder-plants	*tageruft* (*Tribulus terrester*)
	taynast (*Echium humile*)
	tamaghé (*Moricandia arvensis*)
	aẓren (*Monsonia heliotropioides* & *M. nivea*)
Perennial fodder-plants	*afeẓu* (*Panicum turgidum*) Scarce
	abseṛ (*Acacia Raddiana*) –
	tamat (*Acacia seyal*) –
Saliferous plants	*aramas* (*Atriplex Halimus*)
	aẓawa (*Tamarix gallica* and related species)

(3) *Atakor*

Annual fodder-plants	*tageruft* (*Tribulus terrester*)
	tamaghé (*Moricandia arvensis*)
	tanesmint (*Rumex vesicarius* & *R. roseus*)
Perennial fodder-plants	They are scarce and of little value
Saliferous plants	*aramas* (*Atriplex Halimus*)

7

*233 Each of the three vegetational zones of Ahaggar has its advantages and disadvantages. If we consider
824 a good year when rain has fallen abundantly with a resultant regeneration of all fodder plants, the
137 *Atakor* zone has very-excellent pasture. For the plains and the stony mountain slopes are then entirely
132 covered with annual plants which by the Tuareg are considered the very best fodder. The Tuareg also
133 claim that the *upper mountain zone is preferable because of its cooler climate*, which has a beneficial influence on the lactation of domestic animals. The disadvantage of the *Atakor* zone is the lack of acacias to which can be added the scarcity of fuel. The *Tarayin* zone possess characteristics of the *Atakor* zone and of the *Abada* zone. The *Abada* country is botanically very different from *Atakor*. It has annual pastures of great value when abundant rainfall has been experimented and it also has valuable pastures of perennial plants. With heavy rain the *Abada* country is excellent for stock-breeding, and fuel can be found everywhere. But the Abada country is hotter than are the zones of *Tarayin* and *Atakor*.

If rain falls abundantly all over Ahaggar there is good pasture in all three zones. But rainfall is more frequent and heavier at high altitudes than in the *Abada* zone, so that *Atakor* normally has by far the best pasture of annual plants which spring up late in summer or in autumn. The *Abada* zone on the other hand has the very best pasture of perennial plants, notably acacias that grow around the lower parts of the valleys which are always flooded when it rains in the high mountains.

221 The fluctuations of plant development determine the nomadic migrations of the Ahaggar Tuareg.
*233 A few tribes have their normal grazing grounds in *Atakor* (e.g., the *Dag Ṛali* and the *Kel Taẓulet*).
824 They camp in this zone at most seasons to let their goats and sheep feed on fresh and dry annual pasture.
132 In dry years and during the hot summer season they may move to the *Tarayin* zone where there are perennial fodder plants, but they rarely camp in the *Abada* country. Many tribes have their normal grazing grounds in the *Abada* zone (e.g., the *Aguh-en-tehlé*, the *Ayt Lowayen*, the *Iheyawen Hada*,
342 and the *Kel Ṛela*), but move to the *Atakor* when annual pasture is good in this region. They live in *Atakor* with tents and flocks when annual plants are green, while the rest of the year they camp in the *Abada* country to let their animals feed on acacias and other perennial species. Finally there are two tribes (*Tégẹhé-n-Efis* and *Iklan-en-tawsit*), the members of which camp in the *Abada* country all the year round even when rich annual pasture is found in *Atakor*. However, members of these tribes may send their camel herds to the *Atakor* zone, accompanied by herdsmen, while tents and flocks remain in the lower country.

221 With the exception of a few noble households which keep up their old tradition to subsist largely
*233 on camel's milk, the Ahaggar Tuareg do not keep their she-camels in Ahaggar unless there are excellent
564 pastures of annual plants in this area. They take their camels to pastures far away from Ahaggar,
262 notably to the Tamesna region where they have their animals guarded by herdsmen who are frequently
567 slaves. In very dry years there are very few camels in Ahaggar – just the animals needed for riding and transportation. It is in fact very easy to take camels to distant pastures, and it is most necessary to give these animals the utmost care as they are most valuable and their breeding is a very slow process
*233 (cf. p. 56). Goats do not need such excellent fodder as do camels. They can eat almost everything, but
731 in dry years goats may also suffer severely from lack of suitable fodder. This was the case in the year
361 1954/55 when I stayed in Ahnet and in Ahaggar. In the small camps of three to four tents each it was

*233 normal every day to loose one or two goats which died of hunger. The goats were too thin to be mated,
731 and even in winter there was no milk, or so little, that it was all consumed by small children. In spite
of these very severe conditions most Ahaggar Tuareg stayed in Ahaggar with their flocks which subsisted
on dry perennial plants and annual plants that were two years old. Conditions were extremely bad in
221 the region of Ahnet, and about half of the Ahnet Tuareg left their country to go southwards with
*233 their camps and goats, to the regions of Ti-n-ẓawaten. In severe drought periods some Tuareg may
731 move their camps far outside of Ahaggar, but even then most of them will remain in their native
country for extensive goat migrations are difficult and cannot be realized without a loss of the meagre
animals. Most Tuareg therefore prefer to remain and to avoid the strenuous journey connected
with these migrations. They may loose many animals during a drought, but they know that sooner
or later rainfall will occur so that pastures will regenerate quickly to let the animals grow fat to
yield milk and to be mated. The increment of goats is extremely quick in comparison with that
of camels.

*233 Stock-breeding conditions are on the whole not very favourable in Ahaggar, but pastoral Tuareg
731 of this region have developed an economic system which secures their existence even in very bad
years of extreme drought.

137 In the introductory description of Tuareg environment it was stated that the Ayr Massif and the
*233 surrounding plains have far better possibilities of stock-breeding than Northern Tuareg countries.
The broad river valleys of Ayr are very rich in persistent plants which also grow on slopes and in
depressions outside the valleys, and the spring of annual pastures is an annually recurrent event. One
132 informant told me that there had not been any drought in the Agadez region throughout the many
*233 years the French had reigned over Ayr. At an unknown date in the past, it is said, a very severe
drought persisted in the country for a period of seven years, and the Tuareg who had many goats
and sheep fed these animals on charcoal. Since then rain has fallen every year and though more

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Fig. 96. Tuareg feeding his riding camel with boiled tea leaves which are considered excellent fodder for camels. Ahaggar, the *Dag Ɣali* tribe.

*132 233 abundantly in one year than another there has always been rain enough to allow the annual pastures to spring up.

*233 In Ayr there are three species of trees or bushes which remain green all the year round, viz. *ėhezgin* 824 (*Salvadora persica*), *tadent* (*Boscia senegalensis*), and *turza* (*Calotropis procera*). They are extremely common, and the two first species play a certain role for fodder during the hot and dry summer season (*ėwilen*), but dry annual plants then constitute the best fodder for all domestic animals. The annual plants comprise various species; around Agadez they are mainly grasses, but the small thorny seed-plant *ageruf* (*Tribulus terrester*) is also very important. These tender plants spring up shortly after the rains but they wither even before rainfall stops at the beginning of the *ṛarat* season. The perennial fodder plants are of little value in the hot season. The *afezu* grass (*Panicum turgidum*), which is extremely common everywhere, germinates at the beginning of the rains and is dry and contains little nourishment in summer. Acacias form very important fodder plants for camels and goats, but they are also of little value at this season when they defoliate. The two most important acacias are *afagag* (*abseṛ* in Ahaggar) (*Acacia Raddiana*) and *tamat* (*Acacia flava*). The *afagag* acacia germinates shortly after the first rains (*akasa*) and has its highest fodder value in the season of *ṛarat* when the fruit pods fall to the ground providing excellent fodder for all domestic animals. The *tamat*-acacia starts germinating somewhat later and its fruit pods, which are equally important for fodder, do not fall until the beginning of the season known as *tabsit*, at which period the fruit pods of the *agar* tree (*Maerua crassifolia*) also fall. For southern Ayr it can be said that grazing conditions are tolerably good most of the year. They are extremely good when annual plants are green during the period of *akasa*, and they are bad in summer (*ėwilen*) when the lactation of domestic animals is low.

Grazing conditions within the Ayr Massif are much more favourable than in Ahaggar, but one thing is lacking:— There are very few saliferous plants. Thus, for instance, there are very few tamarisks (*temeyut* = *Tamarix aphylla*; *azawa* = *Tamarix gallica*), which are found only within limited areas of the Massif; species of *Salsola* are very rare, and the very important saliferous plant, known to the *233 Northern Tuareg as *aramas* (*Atriplex Halimus*), is not found within the Massif. The Ayr Tuareg there- 317 fore have to feed their animals with salty earth which can be dug in certain parts of Ayr, or with Bilma salt, which plays an enormous part for most stock-breeders of Ayr and adjacent regions. The Ayr Tuareg cannot so easily take their flocks and herds to salt pastures as can the Northern Tuareg. But there is south and southwest of the Ayr Massif a narrow belt of salt-containing soil and water. This 221 region is known to the Tuareg as *Azawaṛ* because of its particular reddish soil. With this particular 824 type of soil, well water and pools will contain some salt, as do most plants, and many Tuareg of the Ayr Massif migrate to the *Azawaṛ* country at the end of the rains to allow their animals to benefit 221 from the salt-content of the water and plants there. There is another reason why some Ayr Tuareg, *233 who have their normal grazing areas within the Massif, migrate south and westwards into the plains, 824 namely the appearance in these regions of a small annual plant known as *emchėken* (*Ipomoea verticillata*). The Ayr Tuareg consider it one of the very best fodder plants for camels, goats, and sheep, but claim it to be less valuable for cattle and donkeys. – At the end of the rains the Ayr Tuareg who migrate to the *Azawaṛ* country camp among pastoralists of different and distant regions. At this season most *Kel Geres* Tuareg migrate northwards to camp around Tegidda-n-edrar and Tegidda-n-

221 tagayt, while the *Iwllemmeden Kel Dennek* at this period will camp around Ingal. Many Southern
*233 Tuareg leave the savannah country to avoid its heavy rainfalls and stock-diseases to let their animals
824 benefit from the salty water and plants in the *Azawaɣ* country.

133 In the country west of the Ayr Massif, the Tamesna Plains, there is in addition to the Ayr Tuareg
162 a numerous population of Ahaggar Tuareg who live constantly in these regions. These plains are
137 botanically different from the mountains. Perennial vegetation is scarce though there are some *tamat*-acacias (*Acacia flava*), but there is a very rich vegetation of annual plants of great importance to
*233 domestic animals. Among these plants can be mentioned *alwat* (*Schouwia purpurea* ssp. *Schimperi*),
824 which is very valuable for camels and also good for sheep, *adreylal* (*Astragalus Vogelii*), and *tagellet* (*Colocynthis vulgaris*). The two latter plants are valuable as fodder for all domestic animals. It is noteworthy that these three species of annual plants last longer than other annual species. They do not wither at the beginning of the *ɣarat*-season, but remain fresh and green all through the winter until about *tabsit*.

It is evident that Tuareg knowledge of botany is extremely comprehensive, and that they use this knowledge to make stock-breeding as rational as possible. They may perhaps not be so rational in protecting pastures, for they cut acacias' boughs to feed the kids resting in the camps, and it is most possible that they also overgraze certain pastures. However, the grazing grounds are very vast in comparison with the number of pastoralists, and I believe that overgrazing and arboreal devastation take place mainly around villages and towns where the flocks of sedentary people graze continuously in the same area. In Ahaggar the valuable fodder plants and plants which are important for collecting are often protected for two or three months in order that they may become fully developed (cf. p. 150, 179).

*233 The Tuareg take great care that their animals do not lack water. It is true that camels and also donkeys can do without water for many days even in summer, but at this season camels should preferably be watered every two or three days, and goats are always watered every two days when the weather is hot. In winter the animals are not watered so often, and this is true particularly if the animals feed on fresh annual plants. Camels can do without water even for weeks and months under such favourable

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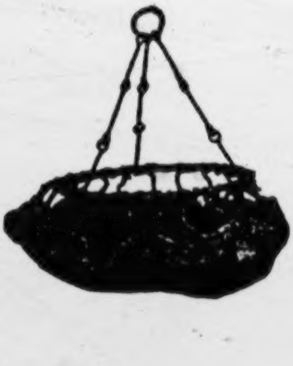

Fig. 97. The leather bucket known as *aje* to the Northern Tuareg. The leather is tied to an iron ring made by blacksmiths. Collected in Ahaggar by Olufsen. Dimension of the iron ring: 0.275 m in diameter. (N.M. G. 1.51).

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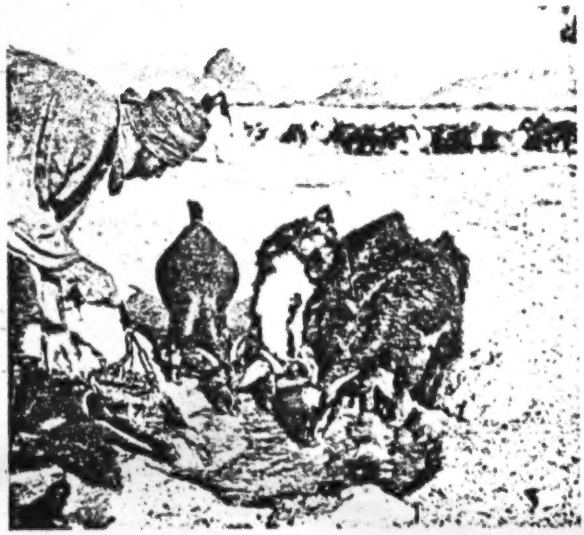

Fig. 98. A slave watering goats by means of the leather bucket called *aǧa*. Water is drawn from a well and poured out into a hole dug in the clayey ground. The goat standing to the left is sheared – a token of the summer season. Tasilé-n-Ajjer.

*233 conditions, and herdsmen, who live with camelherds far away from camps and wells subsisting on
[272] camel's milk, do not consider water necessary. Should domestic animals have eaten salt or salty plants
[271] they are very eager for water even in winter. When I lived in Ahaggar with my camels during the winter
1954/55 they had rightly to be watered every ten days, but in regions where they fed mainly on saliferous
plants they had to be watered more frequently. However, domestic animals must not be watered too
often as this would make them slow and emaciated, and a camel must not be worked too hard the day
after it has been watered.

312 Tuareg camps are always found around wells, pools, or other types of water places for which there
[361] is a large vocabulary. But the Tuareg never camp too close to water places where there is little pasture,
many foreigners and consequently little peace. The distance from camp to water place varies, but is
[132] very frequently 1–3 kilometres. During the rainy season (*akasa*) water is very aundant all over Ayr,
but outside this period conditions of water supply for human beings and livestock are more favourable
[415] in the north than in Ayr, where water most of the year must be drawn from wells. To raise water the
Tuareg use a leather bucket known to the Ahaggar Tuareg as *aǧa* (Fig. 97–98). The water drawn for
[237] the animals is poured out into a hole dug in clayey soil, or into a hole covered with a piece of skin or
leather known in Ahaggar as *tafarawt*. This skin is nowadays frequently substituted by canvas (cf.
312 Fig. 99). Where water is scarce and must be drawn from narrow wells, as in Ayr during the summer
578 season, the watering of flocks and herds gives rise to frequent quarrels between pastoralists. For
[423] though the right to the use of wells is free to all there are many disputes and fights frequently

start around wells. It may happen, for instance, that two men who draw water from the same well get the ropes of their leather buckets entangled. They will then start to quarrel and the result may be a fight with swords. 312 578 [411]

I conclude this chapter with a brief description of the signals used by the Tuareg for their domestic animals. As these animals do not have the same needs for food and water and are frequently mixed with each other in camps and around wells, it is only natural that the Tuareg have different signals to call, stop, or drive away their various types of domestic animals. I have noted these signals among the *Kel Ferwan* Tuareg of Southern Ayr:— 231 233* 192

Signals to call domestic animals:—

goats	*ay, ay*	
sheep	a rolling sound	the three rolling sounds are somewhat different though resembling each other
cows	a rolling sound	
camels	a rolling sound	
donkeys	*ahay, ahay*	

Signals to stop animals:—

goats	*aw*
sheep, cows, camels	*ŏr*
donkeys	*as*

Signals to drive away animals:—

goats	*áy*	pronounced emphatically
sheep, cows, camels	*hey*	
donkeys	*aheyt*	

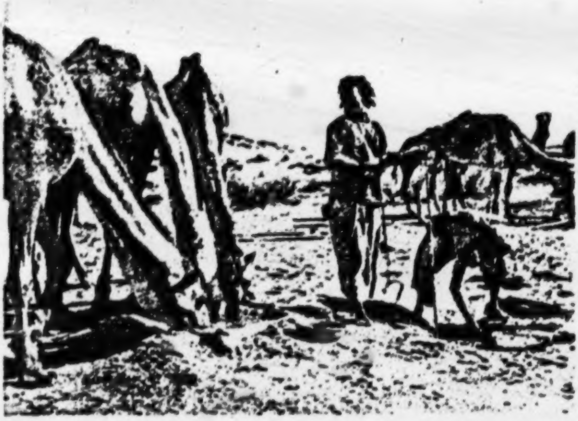

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Fig. 99. Tuareg drawing water for camels which drink from a piece of canvas (*tafarawt*) placed over a hollow in the ground. Ahaggar, the *Kel Ahnet* tribe.

*233 I have referred to the use of such signals above in connection with goat-breeding, and I have mentioned
192 that goats will respond to signals and also to names more willingly than other domestic animals with
[492] the exception of dogs. Some of the signals used in Ayr and Ahaggar differ, and it is interesting that
the Tuareg of these regions use different sounds to accelerate the speed of riding camels. The riders in
[171] Ahaggar use the same signal as the Arabs – a gutturally pronounced *ha* – while the Ayr Tuareg use a
rolling sound *ur*. The signal used by the *Kel Tahabanat* of the *Western Iwllemmeden* is *ut*.

Social Aspects of Stock-Breeding

Pastoral Tuareg have (or had) important matrilineal traits of social organization and also patrilineal traits which have been adopted partly through contact with the Arabs from whom they have taken over the Islamic rules of inheritance. Ḳoranic inheritance rules are followed both in Ahaggar and in Ayr, but some social aspects of Tuareg stock-breeding differ in these two areas. 611 428 177

AHAGGAR

I shall briefly describe the Ḳoranic rules valid for inheritance of all kinds of individually owned property, e.g., livestock, material goods, and money, though most Tuareg do not regard money as something to be conserved. It is a main rule that children inherit their parents in such a way that a son gets a portion twice as large as that allotted to a daughter. Important details of these rules can appropriately be illustrated with a few examples which I took down in Ahaggar:— 428

(1) A married couple having a son and a daughter. When the husband dies all his property is divided into eight parts of equal value. One of these parts is given to the widow, and the remaining seven parts are thereupon re-divided into three parts, two of which are allotted the son while one part is given to the daughter. When the widow dies her property is divided into three parts – two parts for her son, one part for her daughter.

(2) A married couple having a son and a daughter. The wife dies and her property is divided into four parts – one for the widower, another for the daughter, and two parts for the son. When the widower dies his property is divided into three parts – two parts for the son, one part for the daughter.

(3) A married couple having no children. At the death of the husband his property is divided into four parts. Only one of these parts is allotted to the widow, while the remaining three parts are taken over by individuals of the husband's family according to the rules mentioned below for inheritance from an unmarried man.

(4) A married couple having no children. At the wife's death her property is divided into two parts. One part is given to the widower, the other to the deceased wife's family.

(5) At the death of an unmarried man one sixth of his property is given to his mother (or to his mother's mother), while the remainder is taken over by his father.

(6) An unmarried man who has lost his father, but has alive his father's father, a brother and a

428 sister, and his mother (or his mother's mother). At the death of the unmarried man one sixth of his fortune is given to his mother (or to his mother's mother), and the remaining parts are collected and re-divided into three parts, two of which are given to the brother, one to the sister.

(7) An unmarried man who has lost his father but has alive his father's father, his father's brother, and his mother (or his mother's mother). At the unmarried man's death his fortune is divided into six parts, one of which is given to his mother (or to his mother's mothers) while the remaining five parts go to his father's father.

Patrilineal rules predominate in the system of inheritance. With the exception of the mother (or the mother's mother), who inherits one sixth, no matrilineal relative can inherit a deceased person. If a deceased person has no mother or mother's mother alive, all property left is inherited by patrilineal
[114] kinsmen, and even very remote relatives in the paternal line have inheritance rights. Bissuel states
that sisters' children can inherit (Bissuel 1888, p. 110), but the Tuareg I have asked in Ahaggar
(and in Ayr) denied this.

428 Furthermore, it is claimed in Ahaggar that if a deceased person of the *Kel Ŗela* drum-group has
643 no patrilineal relatives alive, his fortune is taken over by the *Amenukal* with the exception of one
sixth in case the mother or the mother's mother of the deceased person is alive. The *Amenukal*, however,
[632] will not keep livestock thus inherited for himself, but will leave it in the tribe to which the deceased
person belonged, and the animals will be under the supervision of the tribal chief who has usufructs
of them. Livestock thus inherited by the *Amenukal* is known as *éhéré wa n eṭṭebel* ("the fortune of the
drum-group)", or *éhéré wa n butelma* ("the fortune of the public"); cf. p. 400).

422 It appears from the rules of inheritance just mentioned that domestic animals are owned individually,
[850] and almost everybody among the Tuareg is a stock-owner. Even little children (boys and girls) may
[553] own a few animals which are given them by their parents and their close relatives on various occasions,
e.g., on the naming day seven days after birth. The offspring of these domestic animals also belong
422 to the children who own them, but milk, butter, meat, and the like derived from the animals should
592 serve the needs of the household to which the children belong. Within the household the husband
and his wife also have their individual animals. Husband and wife can freely kill or sell the animals
they own without asking permission of each other, but the meat and the money acquired from sold
animals should serve the benefit of all members of the same household. A household forms an economic
422 unit of closely related stock-owners.

*233 All Northern Tuareg use ear-marks, cut with a knife, for their goats and sheep. There are a great
many types of cuts which have particular names. I have noted some of these marks among the Ahaggar
[114] Tuareg (Fig. 100). But I did not investigate this subject in great detail as it is considered very impolite
[576] to ask a man about ownership of goats (cf. p. 41 f.). The cuts illustrated Fig. 100 are all family marks
[602] so that each mark is used by several patrilineally related persons. But though the Tuareg know their
goats and sheep by sight a small and not very deep cut is frequently added to indicate individual
422 ownership. The earmarks are preferably cut when kids and lambs are weaned (cf. p. 37) at which
*233 time superfluous male animals should also be castrated (cf. p. 118). All true vassals of Ahaggar mark
565 their donkeys with earmarks similar to those used for goats and sheep, though in one vassal tribe
(the *Dag Ŗali*) donkeys are also branded with a redhot iron, like camels. The noble Tuareg of Ahaggar

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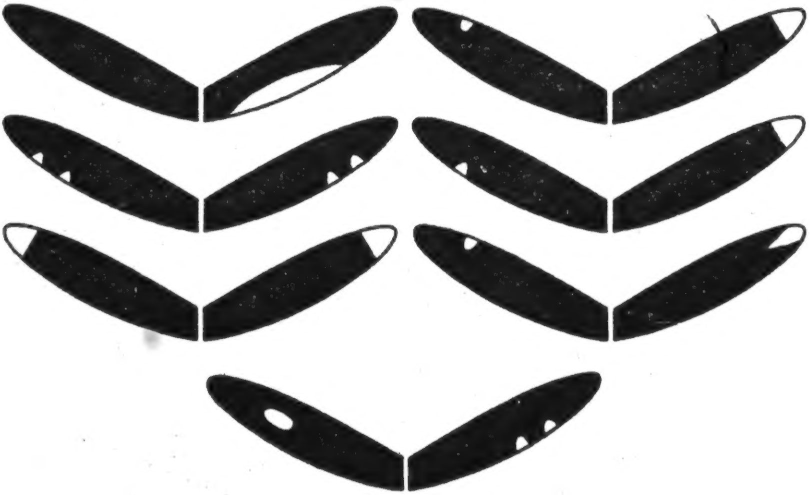

Fig. 100. Earmarks of the types used for goats and sheep among the Northern Tuareg. Ahaggar, the tribes *Dag Ṛali* and *Aġuh-en-tehlé*.

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never use earmarks for donkeys which are branded like their camels, and I believe that this rule also holds for the *Iseḳḳemaren* Tuareg, though I do not know this to be true for tribes other than those of *Kel Terurit* and *Kel-I-n-tunin*.

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The property brands of the Northern Tuareg are burned into the skin of the camel (donkey) by means of a redhot iron known as *éndel* (Figs. 102a–b), but if this implement is not available another piece of iron is used, e.g., the iron tripod for suspension of kettles and cooking pots. The brands are known as *ahwalen* (sing. *éhwel*), and there are a great many different ones which have their particular names. These brands are frequently depicted in literature (cf. Foucauld 1951–52, II, p. 629 f.; Lhote 1955a, p. 235), and spoken of as "tribal brands". However, as property marks are patrilineally inherited while tribal membership is ultimately matrilineally determined, the members of the same tribe will possess more than one camel-brand. For marriages are contracted between different tribes, though some of these units are predominantly endogamous. Furthermore there are a few Tuareg who use different camel-brands for camels inherited from the father and the mother, as there are some who have adopted the mother's father's brand because their father's brand was believed to have brought bad luck in camel-breeding. For these reasons there are frequently more than one brand within a tribe, and individuals or small patrilineages generally add to their main brand (*éhwel*) a supplementary brand known as azeẓlu.

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*433 brand known as *aẓeẓlu*. To illustrate all this I reproduce the camel-brands used within three tribes of
614 Ahaggar (Fig. 101 a–c).

614 The term *tawsit*, which is the Tuareg word generally applied to the unit here called a tribe, seems to
192 have the meaning of "a hand-root from which fingers issue". But the word may have other meanings, e.g., "a mat (*tésebert*) plaited from *afeẓu*-grass" (cf. Foucauld 1951–52, III, p. 1533). The latter meaning intimates something kept firmly together, while the word *tawsit* in its first sense seems to indicate a lineage structure. I have sometimes heard Tuareg indicate tribal relationship between two persons saying that they belong to the same hand (*afus*), or that they are of the same root (*éké*, that is the root of a tree). There are other words which are sometimes used for "tribe". One term is *teḳḳebilt*, another is *aṛref*, but the meaning of these words seems to be the more general one of "people" or "race". An interesting word, namely *hama*, which has the definite meaning of "mother's kin", is according to Foucauld also used synonymously with "tribe" (Foucauld 1951–52, II, p. 603), but according to information I have gathered in Ahaggar these two words are not entirely synonymous.

614 It is most remarkable that the Ahaggar Tuareg do not follow any particular rule for the naming of tribes. Some tribes are named after an ancestress (e.g., *Kel Ṛela* = *Kel Kella*, that is "people descending from the woman *Kella*"), while other tribes have avuncular names (e.g., *Téġehé-n-Efis*, that is "the man *Éfis*'s sister's children"). Both these principles intimate that the tribe is a matrilineal unit, but certain tribes have patrilineal names much like those of Arab tribes (e.g., *Dag Ṛali*, that is "sons of the man *Ṛali*"; *Ayt Lowayen*, that is "sons of the man *Lowayen*"). Reference to an ancestor is also made in another way (e.g., *Ikadeyen*, that is "those descending from the man *Kadi*"). In addition we have tribal names which seem to be a kind of nick-names (e.g., *Aġuh-en-tehlé*, that is "the Achilles-tendon of *tahlé*" – the word *tahlé* being the name of a perennial plant (*Typha elephantina*), and we have geographical names (e.g., *Kel Ahnet*, that is "the people of the Ahnet country"; *Kel Taẓulet*, that is "people of the Taẓulet region", etc.).

614 Previously I have used the term "clan" for the Tuareg term *tawsit* in agreement with the fact that
611 many people claim it to be a matrilineal unit (cf. Nicolaisen 1959). Thus the noble Tuareg of the *Kel*
565 *Ṛela* tribe say that they all descend from the woman *Kella*, who lived about seven generations ago and had a maternal female cousin *Sakina* (or *Skina*) who became the ancestress of the other prominent noble tribe in Ahaggar named *Taytoḳ*.

The very numerous vassal tribe the *Aġuh-en-tehlé* is also said by its members to constitute a matrilineal unit. They claim descent from a common ancestress and occasionally use the name *Téġehé-n-*
Elimen for their tribe. Actually the *Aġuh-en-tehlé* tribe falls into three sub-tribes known as *Kel Tayḥaw-*
[613] *hawt*, *Isandan*, and *Kel Aṛefsa*. They are said to be matrilineally related, but nobody is able to prove this genealogically, and among the *Isandan* there is a matrilineage of four generations which is matrilineally related to people of the *Ibettenaten* tribe and not to their fellow tribesmen.

Members of the important vassal tribe the *Dag Ṛali* will also frequently claim common matrilineal descent. However, they do not know the name of their proper ancestress. They say that they descend from a woman named *Takama* who was also the ancestress of the vassal tribes known as *Ayt Lowayen* and *Kel Ahnet*. The *Dag Ṛali* tribe was founded by the man *Ṛali* who lived about seven generations
[613] ago. It falls into two halves known as the *Dag Ṛali* proper and the *Imessiliten*. Some Tuareg of the

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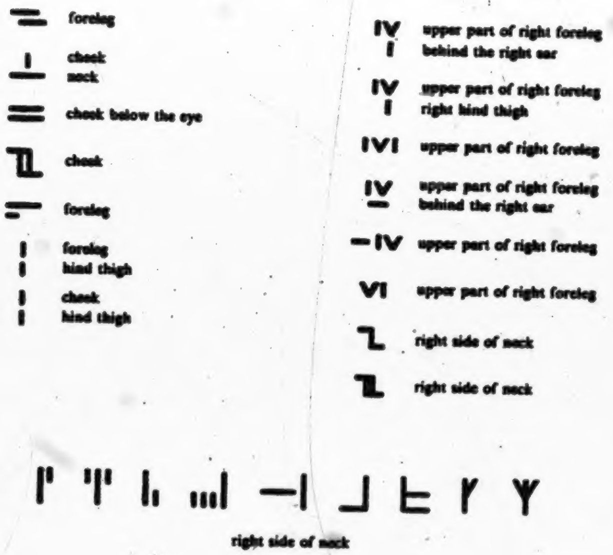
foreleg
cheek
neck
cheek below the eye
cheek
foreleg
foreleg
hind thigh
cheek
hind thigh
IV upper part of right foreleg
I behind the right ear
IV upper part of right foreleg
I right hind thigh
IVI upper part of right foreleg
IV upper part of right foreleg
behind the right ear
upper part of right foreleg
VI upper part of right foreleg
right side of neck
right side of neck
right side of neck

Fig. 101 a–c. Camel-brands of three Ahaggar tribes.

a. Brands of the *Kel Ṛela* tribe.

b. Brands of the *Aġuh-en-tahlé* tribe. The main brand of this tribe is V called *temasort*. The brands ℸ & Ⲧ are due to intermarriage with the *Iklan-en-tawsit* tribe where the principal brand is Ⲧ called *amesleġ*.

c. Brands of the *Dag Ṛali* tribe. The main brand characteristic of this tribe is | placed on the right side of the camel's neck. This brand was that used by the founder of the tribe named *Ṛali* and to-day it forms part of most *Dag Ṛali* brands which are always placed on the right side of the camel's neck. The *Dag Ṛali* brands have individual names. [532] The last one is known as *sékkilt n aġaleġ*, that is "the raven's foot".

Dag Ṛali tribe may claim that these two halves are matrilineally related to one another, but also that 614 they do not descend from sisters. It seems in fact as if these two halves stand in a cross-cousin relation- 611 ship to one another, and it is in agreement with this that the *Dag Ṛali* proper speak of the *Imessiliten* 565 as "children of their mother's brother". The two halves in the past intermarried much though marriages 613 between them are very rare nowadays. Thus in 1951 there were only two marriages between people [802] of the two tribal halves. [582]

I believe that other tribes of Ahaggar have a structure similar to that of the *Dag Ṛali*, but the [114] structure of Tuareg tribes is extremely difficult to grasp because very few Tuareg know their genealogies more than three or four generations back.

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592 Many Tuareg claim that their tribe is an endogamous unit, but to-day there is no tribe that is exclusively endogamous. All tribes intermarry more or less with people of other tribes. The most endogamous tribe is perhaps the *Dag Ṛali* of which the half known as the *Dag Ṛali* proper has contracted a few marriages with people of the *Aġuh-en-tehlé* (the *Isandan* sub-tribe) while the other tribal half known as the *Imessiliten* has intermarried with the *Ikechchemaḍen* tribe.

591 The rules of residence are based upon both patrilineal and matrilineal principles as follows:—

(1) When the wedding ceremony is over the newly-married couple will stay one year in the camp of the wife's parents. This one year's stay in the camp of the wife's family has nothing to do with bridal service. Very frequently the husband does not live continuously with his wife throughout this period, but lives in his parents' camp and pays occasional visits to his wife. Some Tuareg say that the main reason for this one year's stay in the camp of the wife's family is due to the fact that about one year is needed to prepare tent, household implements, and the like for the newly-married couple (cf. p. 460 f., 472). The stay in the wife's family camp is not always strictly one year, but may be [844] longer or shorter. But if the wife is pregnant she must leave her parents' camp to bear her child in the camp of the husband's family.

(2) After the one year's stay the couple will settle with the husband's father to remain with him as long as he is alive.

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Fig. 102a–b. Hafted irons (*éndel*, pl. *éndelen*) to burn property marks into the skin of camels and donkeys.

a. Camel iron. Ahaggar, the *Dag Ṛali* tribe. Dimension: 0.466 m. (N.M. G. 5251).
b Donkey iron. Ahaggar, the *Dag Ṛali* tribe. Dimension: 0.202 m. (N.M. G. 5250).

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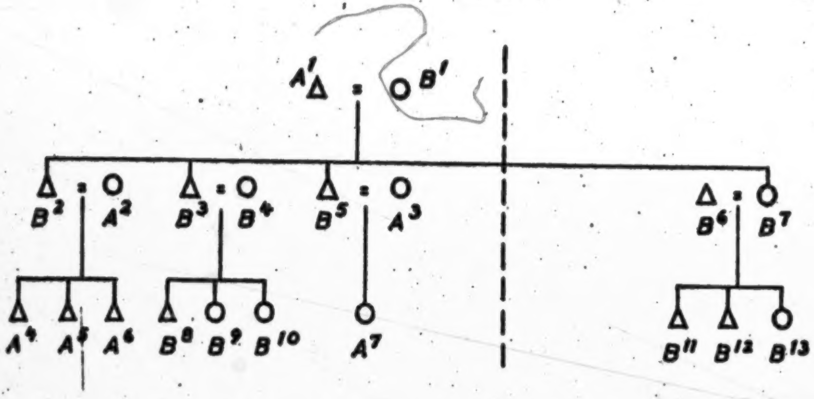

Fig. 103. Illustration of the rule of residence for persons descending from a man of the *Aǧuh-en-tehlé* tribe (A^1) and a woman of the *Dag Ṛali* tribe (B^1). The *A*-people belong matrilineally to the *Aǧuh-en-tehlé* tribe, the *B*-people to the *Dag Ṛali*.

People living with the *Aǧuh-en-tehlé* tribe.

At the death of A^1 of the *Aǧuh-en-tehlé* tribe all persons will settle in the territory of the *Dag Ṛali* tribe with maternal kinsmen of B^1, and they will remain there also after the death of B^1.

At the death of B^2 his wife A^2 and her children A^4–A^6 will go to her father or maternal kinsmen of the *Aǧuh-en-tehlé* tribe as will be the case with A^3 and her child A^7 at the death of B^5. At the death of B^3 his wife B^4 and children B^8–B^{10} will remain with the *Dag Ṛali*.

People living with the *Dag Ṛali* tribe.

If B^6 dies while A^1 is still alive, B^7 and her children B^{11}–B^{13} will go back to the camp [768] of A^1 in the *Aǧuh-en-tehlé* territory. After the death of A^1 they will return to the *Dag Ṛali* to join the camp of B^2, B^3, and B^5.

If for instance B^3 kills a man of a third tribe (e.g., the *Ayt Lowayen*) the *Aǧuh-en-tehlé* and the *Dag Ṛali* tribes are [682] both responsible for the payment of blood-wealth as long as A^1 is alive and B^3 lives with the *Aǧuh-en-tehlé* tribe. [672] If A^1 has died and B^3 consequently lives with the *Dag Ṛali*, this latter tribe alone will be responsible for the payment of blood-wealth.

(3) After the death of the husband's father the couple will join the husband's matrilineal kinsmen (his mother's brothers) together with his mother should she still be alive.

(4) At the husband's death his wife and their children will move back to the wife's kinsmen. [768]

As may be seen from this complicated rule of residence, a single death may in fact give rise to a ange of territory and camp for a great many people. This is illustrated in Fig. 103 which depicts e rules of residence in the light of actual marriages between the two vassal tribes, *Dag Ṛali* and *ǧuh-en-tehlé*.

614 Should a man descend from a father and a mother of different tribes he will start his life as a member
591 of the father's tribe and end as a member of the mother's tribe. However, a man who descends from
such a mixed marriage will, even as a member of his father's tribe, have an intimate connection with
[682 the tribe of his mother. Thus it is said that if, in the past, a man of a mixed marriage between two
672] tribes lived in his father's tribe and had to pay blood-wealth for a murder, his mother's tribe should
pay half of the blood-wealth, while in case his father had died and he lived in his mother's tribe his
father's tribe should not contribute.

614 Tribal membership is ultimately matrilineally determined, and though we cannot characterize a
611 tribe as a pure matrilineal unit the matrilineal principle plays a great part in tribal organization. It is
[428] valid for succession to tribal chieftainship, for succession to land-rights and to property considered
[565] indivisible; in noble tribes it is also valid for succession to rights and obligations towards vassals, in
vassal tribes for rights and obligations towards noble Tuareg. These rules have been strictly followed
614 by most Tuareg tribes of Ahaggar up to modern times. Within all tribes there seems to be one par-
613 ticular matrilineage from which the tribal chief should be elected. Thus in the vassal tribe of *Dag Ṛali*
the chief must be elected from the *Dag Ṛali* proper, while a man descending from the ancestress of the
tribal half known as *Imessiliten* cannot become elected chief. In the *Aġuh-en-tehlé* tribe the supreme
chief of the three sub-tribes should be elected according to matrilineal rules within the *Kel Taṛhawhawt*
sub-tribe.

614 Tribes are territorial units. The dominant noble tribes have as their territory the very large area
565 which is divided into territories of vassal tribes within their drum-group. Several vassal tribes are
631 named after the territory where they live, and the vassal tribes which have ancestral names are also
423 attached to a particular territory. The Tuareg frequently speak of "*amaḍal n Dag Ṛali*", "*amaḍal n
Aġuh-en-tehlé*", etc., that is "the land of the *Dag Ṛali* tribe", "the land of the *Aġuh-en-tehlé* tribe",
etc., though they do not claim that these tribes own the particular territories but merely that they have
[643] particular rights to them. For the land of these tribes is owned by their drum-chief, the *Amenukal* of
Ahaggar. It is stated in literature that such tribal territories are grazing grounds reserved exclusively
for members of tribes. Lhote says that nobody has the rights to graze flocks and herds in the territories
of foreign tribes without permission from their chiefs or from the *Amenukal* (Lhote 1955a, p. 279).
Kilian also mentions that tribal territories are grazing grounds (Kilian 1925, p. 132), and in a study
by Malaurie there is a sketch-map of some of the more important territories (Malaurie 1953, p. 339).
[162] Nowadays foreign camps are very frequently found in the territory of a tribe as mentioned by Capot-
Rey (Capot-Rey 1953a, p. 265 f.), and it is said that this could also happen in the past. The territory
[578] of a tribe was possibly once reserved as grazing grounds for its members, but it is said that one of the
Imenukalen (sing. *Amenukal*) in the past decided that grazing should be free all over the country as
the division of the country into tribal grazing grounds gave rise to much inter-tribal trouble.

614 A tribe is always subdivided into sections which with few exceptions have geographical names –
613 generally the names of important river valleys in the usual camping area. The number of such sections
621 within a tribe varies. In the numerous vassal tribe *Aġuh-en-tehlé* there are eight sections while the *Dag
Ṛali* tribe has four sections. These sections are kin groups with a depth of 4–6 generations, and
within a section there is always a dominant matrilineage from which the section leader, who is

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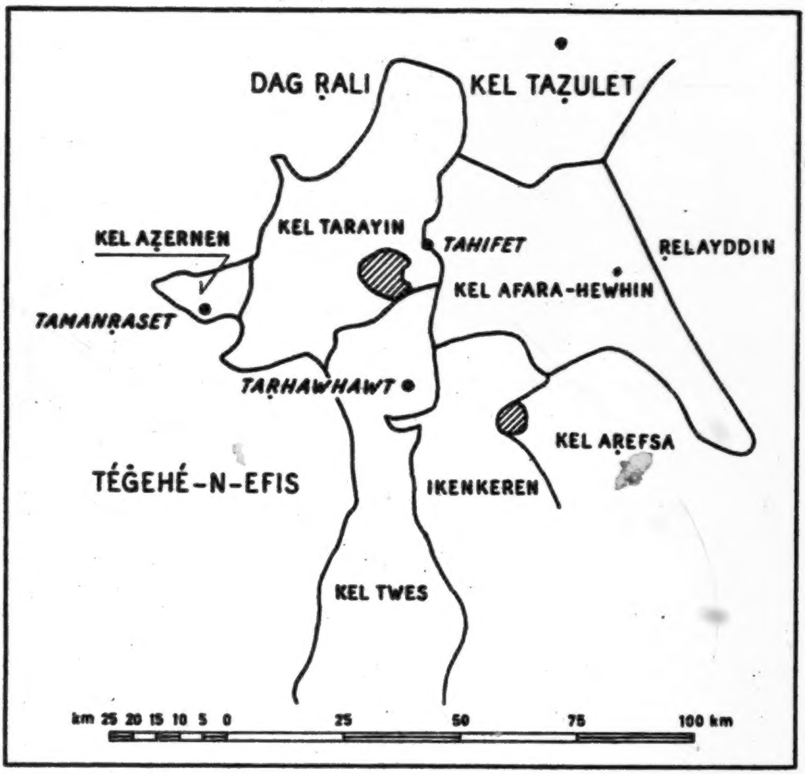
DAG ṚALI
KEL TAẒULET
KEL TARAYIN
TAHIFET
ṚELAYDDIN
KEL AẒERNEN
KEL AFARA-HEWHIN
TAMANṚASET
TAṚHAWHAWT
KEL AṚEFSA
TÉĠEHÉ-N-EFIS
IKENKEREN
KEL TWES
km 25 20 15 10 5 0 25 50 75 100 km

Fig. 104. Map showing the sub-areas of the territory of the *Aġuh-en-tehlé* tribe. The sub-areas have no proper limits towards the south where the country changes into barren and uninhabited desert. The hatched areas are mountainous regions which are not considered parts of sub-areas. West of the *Aġuh-en-tehlé* territory is the territory of the *Téġehé-n-Efis* tribe where two sections of the *Aġuh-en-tehlé* have their normal grazing grounds. To the north are the territories of the *Dag Ṛali* and the *Kel Taẓulet* tribes. The *Kel Aẓernen* section frequently camps in the *Dag Ṛali* territory and intermarries with the *Kel Tamanṛaset* section of that tribe. To the east is the territory of the *Ṛelayddin* who are now considered part of the *Aġuh-en-tehlé*. The *Aġuh-en-tehlé* territory chiefly belongs to the *Aboda* zone, but the northern parts of the two northernmost sub-areas are within the zones of *Tarayin* and *Atakor*.

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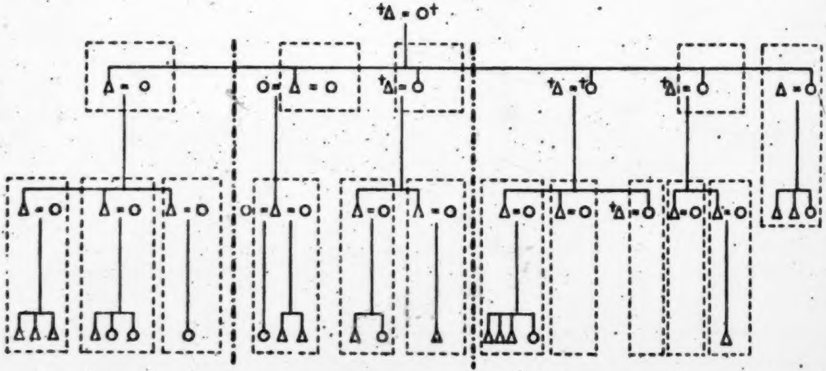

[591] Fig. 105. The section camp of the *Kel Azernen* (the *Isandan* sub-tribe of the *Aguh-en-tehlé*). The camp comprises three goat-herding units of four, five, and seven tents forming three independent camps in case of dry pasture. When grazing is good the three goat-herding camps which co-operate in camel-herding and caravan trading will camp on the same spot with a small distance between each in order that the flocks of the three units shall not mix. - The household to the extreme right does not follow the general rule of residence illustrated Fig. 103. Its members accordingly should camp together with the husband's family, which, however, lives in Ayr whence he has emigrated to Ahaggar.

614 also the representative of the section towards the tribal chief, should preferably be elected. The members
613 of one section will frequently intermarry with members of another particular section, but members
621 of a section will generally marry into more than one particular section and sometimes into sections
[592] of foreign tribes.

613 When grazing is good the sections are identical with camps of 10–20 tents, which otherwise are
621 split up into minor camps of 2–7 tents. These minor camps generally consist of an extended family
596 which co-operates in goat-herding and in various other tasks, although all animals are individually
*233 owned and every tent or household is self-supporting – "it has its own churning bag and its own millet
[592] bag", as the Tuareg put it. The section camps formed during good grazing are made up of three or
four small goat-herding camps which constitute extended families, but the small camps within the
section camps remain co-operative in goat-breeding, and there is generally a distance of 50–100 metres
[476] between each in order that their flocks shall not mix. When the small goat-herding camps of a section
[484] join each other and form bigger camps under favourable grazing conditions, it is not only because
kinsmen appreciate each other's company, but also because the big camp of a section is a co-operative
unit in camel-breeding and caravan trading, for which tasks a goat-herding camp cannot spare the
labour. Should the small goat-herding camps of a section be unable to remain together, they camp so
close to each other that contact between them is comparatively easy. A section camp is illustrated in
361 the diagram below (Fig. 105). The formation of such camps is not generally possible without annual
621 pasture, and section camps are particularly common in the *Dag Rali* tribe resident mainly in the
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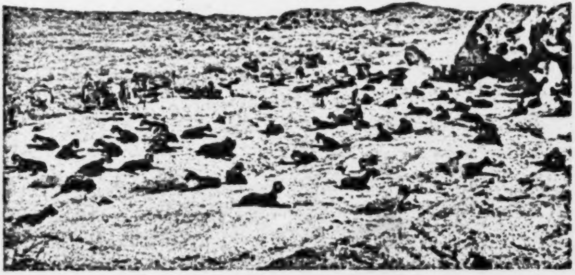

Fig. 106. A small goat-herding camp of three related households. The inmates have not erected their skin tents, but have their luggage and their household utensils hanging upon posts (left). In the hot daytime the people live in the shade of the rock (right). Ahaggar (the *Atakor* zone), the *Dag Ṛali* tribe (the *Kel Tamanṛaset* section).

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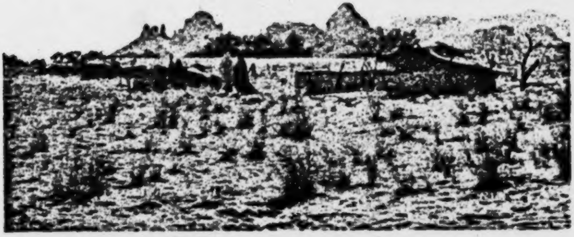

Fig. 107. A camp of four skin tents. Tasilé-n-Ajjer, the *Uraṛen* tribe.

361 *Atakor* zone. In this area kin groups of five or six generations, comprising about twenty tents, may
621 form a section camp for long periods. Thus I was told that all members of the *Kel Tamanṛaset* section
*233 camped together in the same place for eight months of the year 1952. Among the Tuareg, who have their grazing grounds mainly in the *Abada* country, section camps are not so easily formed as annual pasture springs up less frequently. People of such tribes as the *Ikḷan-en-tawsit*, the *Tégehé-n-Efis*, and part of the *Aġuh-en-tehlé* tribe, generally live in goat-camps, which are often smaller than those of the
[824] *Dag Ṛali* tribe of the *Atakor* region. Where goats feed mainly on acacias it is not possible to keep such large flocks together as when grazing consists of fresh or dry annual plants. Acacia leaves are very important for fodder and their fruit-pods are still more valuable, but the trees grow scattered and consequently fodder is not so concentrated. We see again how stock-breeding among the Ahaggar Tuareg is an industry adapted to environment. The size of camps is determined by natural conditions.

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Sub-areas of the territory of the Dag Ṛali tribe

(The tribe is divided into two halves:— (1) the *Dag Ṛali* proper comprising the sections named *Kel Tamanṛaset* and *Kel Terhenanet*, (2) the *Imessiliten* comprising the two sections named *Kel Hérhafek* and *Kel Teñhart*)

Tenants	Name and value of sub-area	Annual land-rent to the *Amenukal*
DANGUCHI, chief of the tribe and leader of the *Kel Tamanṛaset* section	ISEKRAM Hunting of barbary sheep. For every four or five barbary sheep killed one is given to the tenant	2 goats
YEḲI of the *Kel Tamanṛaset* section	TAĞMART No particular value	2 water bags 1 rope of goat's hair
AMMA of the *Kel Terhenanet* section	AṚECHCHUM No particular value	2 water bags 1 rope of goat's hair
KHABTÉ of the *Kel Tamanṛaset* section & AKHASEN of the *Kel Terhenanet* section	I-N-DALAĞ Hunting of barbary sheep Wild donkeys	1 donkey
AFAREḲ of the *Kel Hérhafek* section	AKAL-EREṚEN Hunting of barbary sheep	Unknown
BUSKEYAS & DEMONI, two brothers of the *Kel Teñhart* section	TAHAT Important hunting ground for barbary sheep, which are protected for three months annually. Domestic animals never graze in this sub-area	Formerly three barbary sheep (present rent unknown)
[361] DANGUCHI, chief of the tribe representing the two sections *Kel Tamanṛaset* and *Kel Terhenanet*	ABALESSA A very extended area comprising the village of Abalessa and other agricultural settlements	No land-rent as the *Amenukal* receives dues for every garden in this area
DANGUCHI, chief of the tribe representing the two sections of *Kel Tamanṛaset* and *Kel Terhenanet* Land-rent is paid collectively by members of the two sections	ṬEẒẒA Important hunting ground for barbary sheep, which are protected for three months annually. Domestic animals never graze in this sub-area	1 donkey (formerly four barbary sheep). (In this particular case an annual land-rent comprising two hides of barbary sheep (formerly two barbary sheep) are also given to Danguchi as tribal chief)

Sub-areas of the territory of the Aġuh-en-tehlé tribe 614

(The tribe is divided into three sub-tribes named Kel *Taṛhawhawt*, *Isandan*, 613
and *Kel Aṛefsa*) 423

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Tenants	Value of sub-area	Annual land-rent to the *Amenukal*
SAMA ALATOKH, chief of the *Aġuh-en-tehlé*, chief of the sub-tribe *Kel Taṛhawhawt*, leader of the section *Kel Twes*	Cultivation grounds at Taṛhawhawt and I-n-dalaġ Hunting of barbary sheep Wild donkeys for domestication	2 donkeys
OMANA, *khalifa* (leader) of the *Ikenkeren* section of the sub-tribe Kel *Taṛhawhawt*	Hunting of barbary sheep Collecting of wild seeds	3 goats
ABERĠALI, *khalifa* of the *Kel Tarayin* section of the sub-tribe *Kel Taṛhawhawt*	Hunting of barbary sheep	2 goats
KHOFA of the *Kel Tarayin* section. No position as leader	Cultivation grounds at I-n-aġriwal and I-n-dalaġ. Hunting of barbary sheep. Wild donkeys	2 donkeys
DEYNI, chief of the *Kel Aṛefsa* sub-tribe forming only one section	No particular value	No land-rent
AKAWALI, chief of the *Isandan* sub-tribe and leader of the *Kel Afara-he hin* section	Cultivation grounds at Tahifet Hunting of barbary sheep Wild donkeys	1 donkey
HANU, *khalifa* of the *Kel Aẓernen* section of the *Isandan* sub-tribe	Cultivation grounds at Tamanṛaset In the past wild donkeys	1 donkey
KHOSENI, *khalifa* of the *Ṛelayddin* now attached to the *Aġuh-en-tehlé* tribe	*Khoseni* is in command of the *Ṛelayddin* territory to which all members of the *Ṛelayddin* have equal rights. Each of them gives two goats annually to the *Amenukal*	

The Ahaggar Tuareg have various terms to indicate the size of a camp. A large camp is always 361
known as *amezzaṛ*, while a small camp is called *éṛéwen* or *tamezzaḳ*. These two terms are used to 192
distinguish between goat-camps and section camps (camel camps) though they do not have so absolute
a meaning. Two camps placed close to each other (100–200 metres between them, whether of the same
tribe or not) are known as *hereġen* (or *amezzaṛ n hereġen*) and a camp very far from wells or water
pools is called *aharaġen*. Apart from the migrations between the *Abada* and the *Atakor* zones and 221
those beyond Ahaggar in case of severe drought, nomadic migrations of the Ahaggar Tuareg are not
very extensive and occur within a limited area. The Ahaggar Tuareg are not "grands nomades" like

221 many tribes of the northern desert, and migrations are on the whole independent of caravan trading.
[241] Migrations are to some extent determined by agriculture in cases where the households possess
[423] irrigated gardens cultivated on their behalf by the *Ḥarratin* (*Izeggaren*). Some goat-camps may move
their tents close to the agricultural settlements when wheat and barley are harvested in April. Date
[565] palm-owning Tuareg of two vassal tribes (*Iklan-en-tawsit* and *Ikechchemaḍen*) will also visit the oases
[245] of Silet and Tibeghin where dates are harvested in August and September. But the Tuareg visiting
these oases will generally not take flocks and tents with them when collecting their dates, which are
*[233] harvested mainly by black-skinned *Ḥarratin* of Abalessa. It should once more be mentioned that most
Ahaggar tribes in dry years keep their camel herds outside of Ahaggar – mainly in Tamesna – and
the members of a section have their herds guarded collectively in these distant regions.

423 The territory of a vassal tribe is generally divided into sub-areas, the right to which is vested in
311 individual tenants. These sub-areas may be valuable grazing grounds, but most of them have an
economic value in other respects also. Some are important hunting grounds for barbary sheep or for
the catching of wild donkeys for domestication, others have a value for the collection of wild seeds,
or have soil and water suitable for agriculture. A few areas possess all these qualities. I have studied
614 the division of the tribal territory into sub-areas only in the two tribes *Dag Ṛali* and *Aguh-en-tehlé*.
613 In the *Aguh-en-tehlé* tribe there is a certain correspondance between sections and sub-areas in the
423 way that most sub-areas belong to individuals of the matrilineage which forms the core of a particular
section. Consequently the Tuareg of the *Aguh-en-tehlé* tribe sometimes speak of sub-areas as section
territories. However, two tribal sections living outside the tribal territory have no particular sub-areas,
and one section has two sub-areas, the rights to which are vested in two individual tenants
(cf. p. 149). In the *Dag Ṛali* tribe there are more sub-areas than tribal sections, and some sub-areas
have two tenants who belong to distinct tribal sections, members of which all have the right to use
[428] these sub-areas (cf. p. 148). When a tenant dies his rights to a sub-area should be taken over by a
maternal kinsman who lives in the section to which he belongs matrilineally. Tenants of sub-areas are
[643] frequently section-leaders. In the lists p. 148–149 where I mention the sub-areas in the *Dag Ṛali* and
Aguh-en-tehlé tribes are indicated the names of tenants, the value of their sub-areas, and the annual
land-rent paid to the *Amenukal*, who is the true master of the land inhabited by tribes of the *Kel
Ṛela* drum-group.

423 For the land-rent (*ehéré-n-amaḍal*) paid to the *Amenukal* the tenants obtain the following rights
422 over their sub-areas:—

(1) They can forbid grazing within their area or in part of it in order that plants may germinate and become fully developed. For plants valuable exclusively for grazing domestic animals the period of protection will be up to two months, but certain plants which have seeds valuable for collecting are protected for three months.

(2) They have the right to half of all the wild donkeys caught in their areas.

[224] (3) They have the right to part of all barbary sheep killed. Foucauld says that in certain hunting
grounds the hide and the meat of a slain animal must be given to the tenant, while the hunter can
keep only the head, the paunch, and the intestines (Foucauld 1922, p. 81; Foley 1930, p. 43 f.). My
own information agrees with Lhote's statement that the tenants in general have the right to the hide,

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Fig. 108. A camp of two related goat-herding units with their straw-huts (*ikebran*, of the cylindrical type) placed at a certain distance from each other in order that the two flocks shall not mix. Taslié-n-Ajjer, the *Kel Uhet* tribe (*Iseḳḳemaren*).

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422 the head, and half the meat (Lhote 1955a, p. 284), but for certain hunting grounds there are different
224 rules (cf. list p. 148).

423 (4) The tenants have the right to dues from the crops of every garden in their sub-areas, but for
241 sub-areas of the *Dag Ṛali* tribe these payments are now given to the *Amenukal* because, it is said, the
Dag Ṛali Tuareg consider such dues incompatible with Islamic law. In the *Aġuh-en-tehlé* tribe the
tenants receive 10 kg per garden from a crop of wheat and barley (grown in winter), 10 kg from a
crop of millet (grown in summer), and 4 kg from a crop of tomatoes.

625 Should the rights of tenants be violated, the offenders will be fined by the *Amenukal*, the indemnity
643 falling to him and not to the tenant. In the past there was a fixed indemnity of three goats for the
423 violation of protected pastures. Nowadays the price is determined by the *Amenukal*. When a tenant
[428] dies his rights and obligations should preferably be taken over by a maternal kinsman. Traditionally
the usufructs of a sub-area are reserved to people of the same section as the tenant, but should the
[613] tenant be identical with the chief of the whole tribe they belong to all tribal members. These traditional
rules, however, do not seem to be observed very strictly nowadays except for the hunting of barbary
[114] sheep in certain areas. Lhote seems to be wrong in stating that the chief of the tribe has the right to
forbid grazing and protect pastures in the whole tribal territory (Lhote 1955a, p. 279). In the two
tribes here described this right is invariably vested in the tenants of sub-areas.

AYR

* 422 The Ayr Tuareg follow the Islamic rules of inheritance described from Ahaggar p. 137 f., and property
233 marks as in Ahaggar are patrilineally inherited in the way that people take over their father's mark.
[428] However, property marks play a less important role in Ayr, where the Tuareg with the exception
of the *Igdalen* Tuareg (vassals) do not mark goats, sheep, and cattle. Other tribes of Ayr mark only
camels and donkeys, and branding with a redhot iron as well as earmarks cut with a knife are used
for these animals. Both types of marks are known as *éjwel*. Some Ayr Tuareg and all Tuareg of the
Kel Geres group use brands for camels and donkeys, and this seems also to be the case with the
[113] *Iwllemmeden Kel Dennek*. Some of the brands used among the *Kel Ayr* are published by Rodd and
Nicolas (Rodd 1926a, pl. 21 p. 195; Nicolas 1950a, p. 268 f.). The earmarks used for camels and

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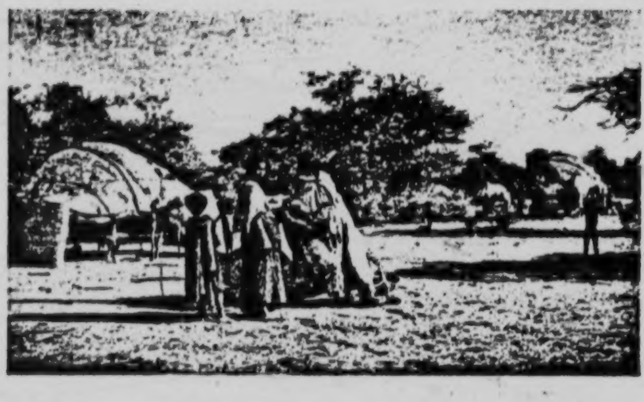

Fig. 109. A family camp of four mat-covered barrel-vaulted tents. Ayr, the *Igendáyaen* tribe.

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233 donkeys by certain Ayr Tuareg are most interesting. Though such marks are used by many tribes there does not seem to be a great variety of them, and I have noted only the following marks:—

[565] (1) *tallayt*, that is the tip of right ear cut off while a slit is cut into the left ear. This mark is said to be used by all vassals of the *Kel Ferwan* group, but the members of the two tribes *Kel Akerra* and *Imezzureg*, who claim to be noble by origin, have an additional brand burned into the left hind thigh close to the animal's anus. This brand is called *ekomed.*

[565] (2) two slits in the animal's left ear. Though different from the mark just mentioned it is said also to be called *tallayt*. It is used by the noble *Kel Ferwan* Tuareg (the *Irawatten*), and also by the negroid *Irawélen* who in the past were once slaves of the nobility.

(3) *tabelechchat*, that is one slit in the left ear. This mark is used by the *Ikezkezen* Tuareg who are politically attached to the *Kel Ewey* Tuareg.

[428] [772] Though all property marks are patrilineally inherited it may happen in Ayr, as in Ahaggar, that a Tuareg use two marks. For certain Tuareg will use the mother's father's mark for animals given them by their mother's family, other Tuareg have been brought up among matrilineal kinsmen whose mark they have adopted, and there are also people who have adopted their mother's family mark because they believed that their father's mark brought them bad luck in camel-breeding.

614 The Ayr Tuareg of the *Kel Ferwan* group fall into a number of units which are known by the word *tawchit*. It seems to have much the same meaning as the word *tawsit* of Northern Tuareg dialect, but is also used to designate the so-called spiked wheel-trap. I call these units for tribes as they do not seem to correspond to unilateral descent groups. Many tribes have a tradition of their descent from a common ancestress, but though tribal members may know her name they are never able to connect her with their genealogies which are very badly known. To my knowledge there are no tribes of true Ayr Tuareg that are named after an ancestress or have avuncular names. The Ayr tribes have geographical names or are called after an ancestor to whom they are also unable to connect their [591] genealogies. It is possible that the *Kel Ferwan* Tuareg in the past have followed the rules of residence

outlined above from Ahaggar, with the exception that the Ayr Tuareg have never practised the one 614
year's stay in the bride's family camp after marriage. To-day the *Kel Ferwan* tribes of Southern Ayr 591
do not follow very strictly any particular rule of residence. There is a strong tendency to patrilocal
residence, but a man will usually continue to live with kinsmen of the camp where he was brought
up as a child. If a man has grown up with maternal relatives owing to the loss of his father as a boy,
or because his mother and father have divorced, he may remain with matrilineal relatives. I believe 614
that all tribes of the *Kel Ferwan* group of Southern Ayr are bilateral kin groups. And if in the past 592
these Tuareg practised the rules of residence outlined above from Ahaggar, the tribes have been bi-
lateral units as there have always been many marriages contracted between people of different tribes.
Two tribes of Ayr, namely the *Imezzureg* and the *Kel Akerra*, claim that they have intermarried regularly
from very ancient times, because the father of the *Kel Akerra* tribe was the brother of the mother of
the *Imezzureg* tribe, while the father of the *Imezzureg* was a cross-cousin of *Kel Akerra*'s mother.
These two tribes possess their individual chiefs, but have always been very mixed. It seems as if chiefs 614
were elected according to matrilineal rules in the past, but to-day it is claimed that a son of a deceased
chief should be the first in line of succession (cf. p. 456 ff.).

In Southern Ayr camps of all possible tribes to-day live among each other. There are no grazing 614
grounds or particular territories nowadays when everybody is free to go where he likes with flocks 423
and herds. No Tuareg have particular rights over land, and ban on grazing within certain areas, as in [361]
Ahaggar, is unknown. This is said also to have been the case in the past. But in the times preceding [565]
the French occupation of Ayr, all vassal tribes had their particular territories which, according to
Capot-Rey, were formerly marked by walls (Capot-Rey 1953a, p. 265). I have not been able to confirm
this, but the Tuareg told me that in the past tribal territories had frontiers marked out by river valleys
or by natural objects such as large trees. The vassal tribes did not own these territories, which were [643]
allotted them by the drum-chief of the noble *Kel Ferwan* tribe, the *Irawatten*. The traditional territories
or grazing grounds of most *Kel Ferwan* tribes are indicated in the list on p. 423 ff.

At present there seem to be no sectional division of the *Kel Ferwan* tribes corresponding to the 614
division into sections in Ahaggar. The *Kel Ferwan* Tuareg generally live in small camps comprising 621
a few tents. These camps, which co-operate in stock-herding, do not generally exceed four or five tents [596]
inhabited by kinsmen who generally constitute an extended family, e.g., (1) husband, wife, married
sons, and their children; (2) two brothers, their wives, married sons, and their children; (3) a brother
and a sister together with their spouses and children; (4) husband, wife, unmarried children, hus-
band's mother and mother's sister, and his sister's daughter with her husband. These small camps, [591]
as may be seen, are not based upon any particular rule of residence in agreement with what has been
said of residence rules above. The households of a little camp of this kind will remain constantly [476]
together to co-operate not only in goat-herding, but generally in camel-breeding also. The labour for [233]*
camel-herding and caravan trading is more easily provided for in Ayr than in Ahaggar. For camels [484]
are rarely taken to very distant grazing grounds, and caravan trading is often limited to expeditions
to Damergu where the Tuareg fetch their millet. The Tuareg tribes of the *Kel Ferwan* group living
around Agadez have no true co-operative units apart from the small camps of up to four or five tents.
Such small camps of extended families may temporarily join each other in a bigger camp during the 361
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361 *akasa* period when there is green annual pasture, but the large camps have no co-operative functions
621 and no particular leader. The small camps join together to form big camps because their members are linked to each other by bonds of kinship, and consequently like to come together.

361 Most of the year the Ayr Tuareg live in very small camps around wells, and certain camps remain
221 on almost the same spot throughout the year. However, most camps move about in the *akasa* period, and later, at the end of the rains, many camps move southwards and westwards to the salt plains of Azawaɣ.

DIVISION OF LABOUR IN STOCK-BREEDING

462 Before we consider other activities, we shall briefly describe the division of labour in stock-breeding according to sex.

462 In all Tuareg groups noble women do very little work. They engage in a few very esteemed crafts
565 such as embroidery, neat decoration of leather work, and in the north they cut ornamented milk-
[567] bowls from wood. The true domestic duties of a noble household are performed by slaves. This to some extent is also true of other social classes among the Northern Tuareg, while the Ayr Tuareg vassals have very few slaves nowadays. But even in vassal camps among the Northern Tuareg women
462 have their duties and engage in all kinds of domestic work, also in stock-breeding. In the two groups
*233 of Northern Tuareg the division of work in stock-breeding can be seen when one enters a tent of a
342 vassal camp:—

[565] One half of the tent (the left part) is occupied by the woman and contains such implements as are connected with tanning, leather-work, cooking, butter- and cheese-making, and generally all implements connected with the breeding of goats, sheep, and donkeys. The other half of the tent (the right part), occupied by the husband, contains saddles and all other objects connected with camels. The tending of goats, sheep, and donkeys is the task of women, while camel-breeding is the business of men.

462 Before initiation Tuareg boys may be occupied with herding goats, sheep, and donkeys, but when
*233 they have adopted the veil they should preferably take care of camels only. There are, however, a
[857] few occasions where men engage in tasks connected with goats and donkeys:—

Goats like any other animal can be killed only by adult men, who also undertake the skinning and partition of the meat.

Castration of he-goats and rams may be done by men, but it is said that it is also performed by women.

When goats suffer from certain diseases they may in a few very special cases be taken care of by men. Thus when a goat has broken a leg and wooden splints are applied to the fracture this is generally performed by the husband of the household to which the animal belongs.

When goats and sheep are lost in the desert they may be searched for by men mounted on camels.

On the whole there are not many situations where the assistance of men is needed in tending goats and sheep, and most men have so little to do with goat-breeding that they do not know the exact meaning of many colour terms for goats.

462 231 [492] Among Northern Tuareg vassals donkeys are tended by women, who use them for riding and transportation over short distances. Tuareg men rarely ride donkeys, but the assistance of men is needed in connection with some of the tasks of donkey-breeding:—

it may become desirable to increase the stock of donkeys by catching wild animals as already described above. This is always done by men who also break-in the captured animals for riding. The assistance of men is also frequently needed for catching half-wild, though domesticated donkeys.

The marking of donkeys, castration, which is rarely performed, and the curing of diseases, which are also rare, are said to be tasks which should properly be carried out by men.

[565] Vassal women only tend camels when all men are absent from their camp.

The above rules of division of labour are in general also valid in Ayr among the *Kel Ferwan* Tuareg. But there are in Ayr vassal Tuareg who have no camels and vassal men in Ayr frequently ride donkeys. The tending of cows in Ayr is mainly the work of women, who are also more familiar with cattle terms than are the men. – Among the *Kel Ewey* the skinning of goats and sheep, as well as the partition of the meat, are done by women.

428 In the Tuareg groups I have studied both men and women inherit camels, goats, sheep, and donkeys according to Islamic rules of inheritance.

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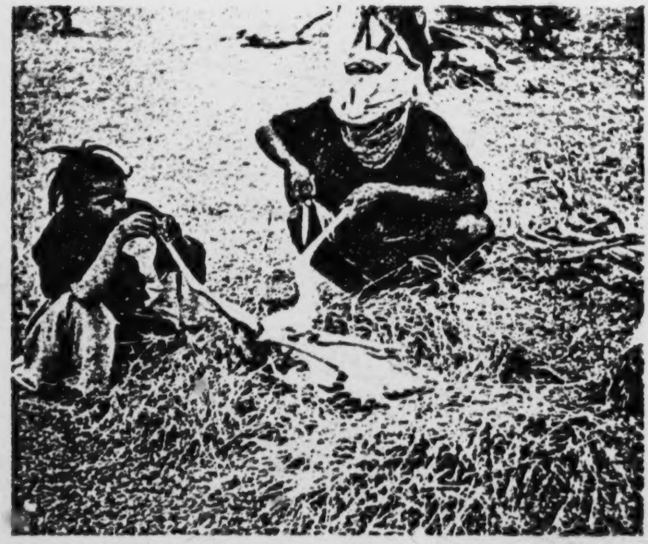

Fig. 110. The skinning of a gazelle placed upon straw of *afeẓu* grass (*Panicum turgidum*). Ahaggar, the *Taytoq* tribe.

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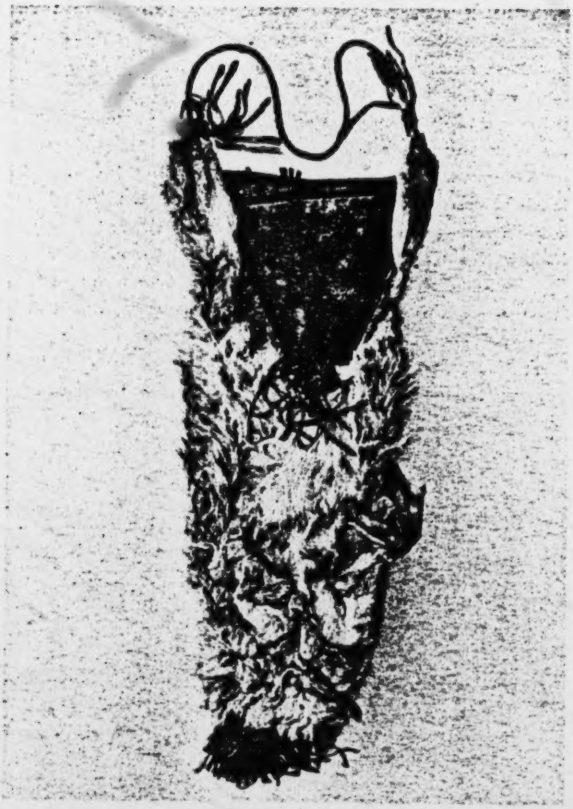

Fig. 111. Skin bag of *séchchékwat* type made from a jackal's skin. The Ahaggar Tuareg believe that people who conserve their money in a skin bag of this kind will have good luck in trading. Ahaggar, the *Ḍag Ṛali* tribe. Dimension: 0.63 m (F.M. 283).

Hunting

For the pastoral Tuareg hunting is not an important occupation, and nowadays it is practised mainly by those few Tuareg who possess rifles or guns. Traditional hunting methods are thus of far less consequence than in the past, but some of them are very interesting and most significant for a historical analysis of Tuareg culture. 224 [411] [121]

AHAGGAR

Northern Tuareg areas are not very rich in game. In Ahaggar the main types of game are the gazelle (*ahenkoḍ*, fem. *tahenkoṭ*; *Gazella dorcas* sp.) and the barbary sheep (*udad; Ammotragus lervia*). The big gazelle (*énir; Gazella dama permista*) and the addax antelope (*amellul; Addax nasomaculatus*) are very rare; they are occasionally seen in the plains outside of the mountains. The ostrich (*anhél*; *Struthio camelus*) was very common in the past, but is now exterminated. 136 224

The small gazelle is rare and shy within the Ahaggar Massif, while fairly abundant and comparatively easy to hunt with a rifle in the northernmost massifs and their surrounding plains. Of seven camps visited in Ahnet 1954, gazelle hunting was engaged in by the members of two households, and I estimate that they killed one or two gazelles every week. In most camps of the Northern Tuareg there are no true gazelle hunters, and when a rare gazelle is killed its meat is easily eaten in one day by the members of a single household – in addition to three or four pounds of wheat-bread or millet-porridge. Gazelle skin is of little practical value to Tuareg craft. It is not generally used for the manufacture of important domestic articles such as water bags and containers for milk and butter, but it is suitable and much esteemed for certain types of decorated leather work and for fine leather cords, e.g., necklaces for amulet cases, reins for riding camels. 224 [262] 237 [283]

Barbary sheep are extremely shy, and they live mainly in inaccessible mountains. They are still fairly common in certain isolated parts of the mountains, but they were more numerous in the past when hunting was practised without rifles.

The Tuareg estimate that the amount of meat obtained from two gazelles corresponds to the meat of one grown goat, while a big barbary sheep provides as much meat as that of four goats. Meat of barbary sheep is better suited for drying than meat of other game animals, and the thick hide of these animals is valuable for the manufacture of tents and for large bags used for the conservation on journeys of dates, grain, flour, and the like. The horns of barbary sheep are used as butter containers (Fig. 165), and some Tuareg add the powder of crushed horns to butter before heating it (cf. p. 222). Barbary sheep are of greater economic value to the Ahaggar Tuareg than other types of game, and [251] [237] [372] [415]

[p.157]

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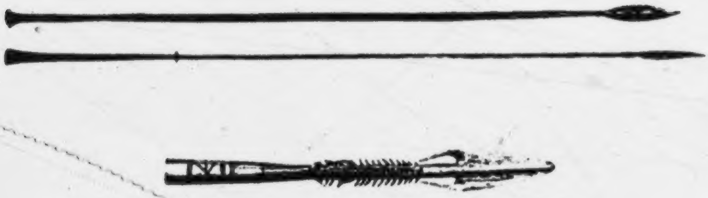

Fig. 112a–c. Tuareg spears.

a. Spear of the *taṛda* type used for hunting. Ahaggar, Olufsen's collection. Dimension: 1.80 m (N.M. G. 1.156).
b. Iron spear of the *allaṛ* type which is mainly a war weapon. Ahaggar, Collected by Olufsen. Dimension 1.82 m (N.M. G. 1.155).
c. Iron point of the barbed Tebu lance (*taṛda*) occasionally used by the Ayr Tuareg. Dimension: 0.265 m (N.M. G. 6619).

224 they are eagerly pursued by many rifle-owning nomads. Lhote estimates that in the year 1939 the Ahaggar Tuareg killed 300 barbary sheep by means of their traditional hunting methods, while in the winter season 1949–50 more than 200 animals were killed with rifles in the central parts of Ahaggar [432] (Lhote 1955a, p. 284). In 1954 the meat of one barbary sheep was sold for 4000 French francs, the [648] hide for 2000 francs. Though hunting of these animals is officially prohibited by the French, it *is* tacitly permitted and meat is frequently sold at the market place of Tamanṛaset.

The traditional methods used mainly in hunting gazelle and barbary sheep are as follows:—

[411] [562] [565] (1) The spear (*taṛda;* Fig. 112a) is nowadays used mainly by slaves, who never possess rifles. Before rifles became common it was the typical hunting weapon of all vassal Tuareg. Hunting with the spear takes place during the hottest time of the day, when the animals hide under rocks and trees to seek protection from the burning sun and the flies. It is then possible to creep very close to the game, and even the otherwise very shy barbary sheep can be taken in this way. When the hunter is close to the hiding place of a barbary sheep he claps his hand, and the animal rises, bewildered, and is then speared. In the past many barbary sheep were killed in this way, and it is said that a skilled and lucky hunter may even secure four or five animals in one day.

[171] (2) The use of stalking animals. Hunting by this method is used by some African stock-breeders (cf. Lagercrantz 1950, p. 97 ff.). There is a detailed description of the use of camels trained for this purpose among the Arabs of the Northern Sahara (Harding King 1903, p. 171 ff.). As far as I know the Ahaggar Tuareg do not train their camels for stalking, but on journeys they frequently hide behind their animals to approach and kill gazelle. In this case the hunting weapon is normally a rifle. But the method is perhaps an ancient one and used also for other hunting weapons in the past, as game animals do not fear domestic animals among which they frequently graze in the desert. In fact, [172] the ancient use of stalking animals in Northern Africa is clearly substantiated by a rock engraving at

Wan Abu (Tasilẹ-n-Ajjer) from the pre-historic cattle-breeding period ("periode bovine"). The picture 224
shows a hunter armed with a bow and hiding behind an ox (?) which is provided with a lead held in /72
the left hand. The hunter approaches an ostrich and perhaps also giraffes and gazelles which are also depicted. This rock engraving was discovered by Lhote, who believes that the stalking animal depicted is an antelope (cf. Lhote 1958, Fig. 69 p. 147, p. 264).

(3) Hunting in disguise. True hunters do not use their ordinary dress of indigo or white colours 224
during a hunt as it is seen by game animals at a great distance. The hunters use preferably a shirt and [292]
a head-cloth of yellow-brown colours which resemble the colours of sand and dry plants. I do not know whether other types of disguise are known. It is very likely (cf. Ayr Tuareg below p. 166).

(4) Hunting from artificial hiding-places. The use of artificial hiding-places consisting of walls built of stone is mentioned by Foucauld, who does not explain their use. They are known as *timuyal* (sing. *tamayilt*) (Foucauld 1951–52, III, p. 1179).

(5) Hunting with dogs. Greyhounds and greyhound-like dogs are used in hunting barbary sheep. The dogs surround the animal and prevent it to escaping, so that it can be killed by a hunter with a spear. There are very few greyhounds among the Ahaggar Tuareg, but slender greyhound-like dogs [231]
are fairly common (cf. p. 114 f.). The true greyhounds may succeed in running down gazelle, and I was told among the *Kel Ajjer* that greyhound are trained not to kill the game but to bite its legs, and then to return to their master to lead him to the ferociously-bitten animal so that he can kill it ritually. However, most Tuareg dogs are not able to run down adult gazelle. Occasionally they catch young animals of which they are allowed to eat such entrails as are not eaten by the Tuareg. Dogs can more easily catch hares. It is said that some dogs are trained to bring caught hares alive to their masters, but most dogs are not too well fed and therefore eat on the spot the hares they catch.

(6) Riding camels are sometimes used for the running down of game animals. Gazelle can be taken in this way only if they are wounded, and barbary sheep normally graze in mountains inaccessible to camels. But it happens that barbary sheep descend into sandy plains to feed on certain annual plants, and can then easily be taken by camel riders as they get very exhausted when they have to run quickly

[824]

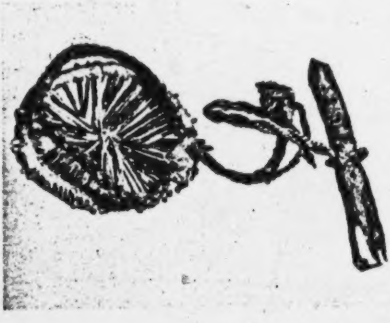

Fig. 113. The spiked wheel-trap (*éfetaw*) connected with a noosed rope (*tayant*) attached to a stick. The wheel is made from straw of the *afeẓu* grass (*Panicum turgidum*) bent into circular form. Small pointed sticks (*iğulan*, sing. *ağula*) are inserted into the straw circle and fixed to it by means of bast of the *absey* acacia (*Acacia Raddiana*) which is wrapped around the straw-wheel and the pointed sticks. The noosed rope is made from date palm bast, but frequently it is also made from *absey* bast. The small pointed sticks are made from twigs of the *aẓawa* tamarisk (*Tamarix gallica*). Ahaggar, the *Ağuh-en-tehlé* tribe. Dimension of the wheel: about 0.20 m (F.M. 141a–b).

224 on sandy ground. This same method is also used to catch asses or wild donkeys for domestication (cf. p. 108).

(7) It has been mentioned above (p. 108) that wild donkeys are also caught by driving them into closed valleys from which they cannot escape. As far as I know the Ahaggar Tuareg do not hunt proper game animals in this way, but the driving method is used in fishing as described below (cf. p. 164).

(8) The spiked wheel-trap (*éfetaw*) (Fig. 113) connected with a noosed rope (*taṛant*) attached to a piece of wood (*aṭula*) is used to catch gazelle, barbary sheep, and donkeys. Such traps are easily and quickly manufactured by the Tuareg, and when they want to trap gazelle in this way they make a great many traps which are placed in the sand around young acacias upon which the animals feed. [223] The arrangement of the spiked wheel-trap is brilliantly illustrated in literature (cf. Lhote 1951a, photos p. 112–113; Brouin 1950, p. 454).

(9) A torsion trap (*tenḍerbat*) provided with a noosed rope is used particularly for barbary sheep. This trap is also depicted in literature (Lhote 1951a, p. 113; Mérite 1942, p. 185). The trap is rare in Ahaggar nowadays. The Ahaggar Tuareg claim that the trap was introduced from Adṛaṛ-n-Foṛas. It is said to be unknown to the Tuareg of Tasilé-n-Ajjer (cf. Fig. 114a).

[564] [177] The Ahaggar Tuareg nowadays engage little in trapping in contrast to the negroid agriculturists (the *Ḥarratin*), most of whom have steel traps (*elkhenlyet*) manufactured in Europe, or made by native blacksmiths on the European pattern. A few agriculturists have large steel traps to be used for gazelle, barbary sheep, and even for the big gazelle and antelope, but the common steel traps are small and are used mainly for hares (*émerwel*, fem. *témerwelt; abekni*; *Lepus harterti*), jackals (*ébeggi, aggur*; *Thos aureus* sp.), and fennecs (*akhorhi, éṛechter*; *Fennecus zerda*). Still smaller traps are used for minor [223] rodents (*éḍewi*; *Gerbillus gerbillus*?) (*akundar*; *Masoutiera* sp.) and for certain birds such as ravens (*aṛaleḳ, taslaft*; *Corvus ruficollis ruficollis*), pigeons (*akekkemaẓ*; *Columbia livia targia*), turtle-doves (*tédebirt*; *Streptopelia turtur hoggara*), and sand grouse (*tékaḍewt, tédebirt*; *Pterocles* sp.).

Steel traps are now widely used, and traditional trapping methods for small animals and birds are therefore rarely resorted to. Among the *Kel Ajjer* small rodents are caught in snares (*asendi*) made of leather. Snares of this kind are known both to pastoral Tuareg and to sedentary agriculturists of Ġanet and Ṛat. Among the latter there are also two different trap-systems used for small rodents, which in both systems are killed by a flat, heavy stone falling upon them. One of these traps is named *téselselt*. I do not know whether these traps exist in Ahaggar.

223 564 Small birds, including pigeons and turtle-doves, are caught in torsion traps by sedentary agriculturists of the oases. Traps of this kind, which are normally provided with a net (cf. Fig. 114b), are found in most oases of the Northern and Central Sahara, but I have never seen them in use among pastoral Tuareg. Pigeon, turtle-dove, sand grouse, and also partridge (*Alectoris barbara duprezi*) are caught in snares made of hair. Ten or twenty of these snares (*éġefey*) are attached to a string so that several birds can be taken at the same time. Bird-snaring is practised mainly by sedentary agriculturists.

262 565 Sedentary agriculturists, slaves, and some vassal Tuareg are not squeamish. Even meat of beasts and birds of prey is eaten by certain vassals, though such animals are unclean and inedible according to Islamic rules. The meat of fennecs, jackals, and a large eagle-like bird known as *tamidda* is eaten

[text continues on p. 162]

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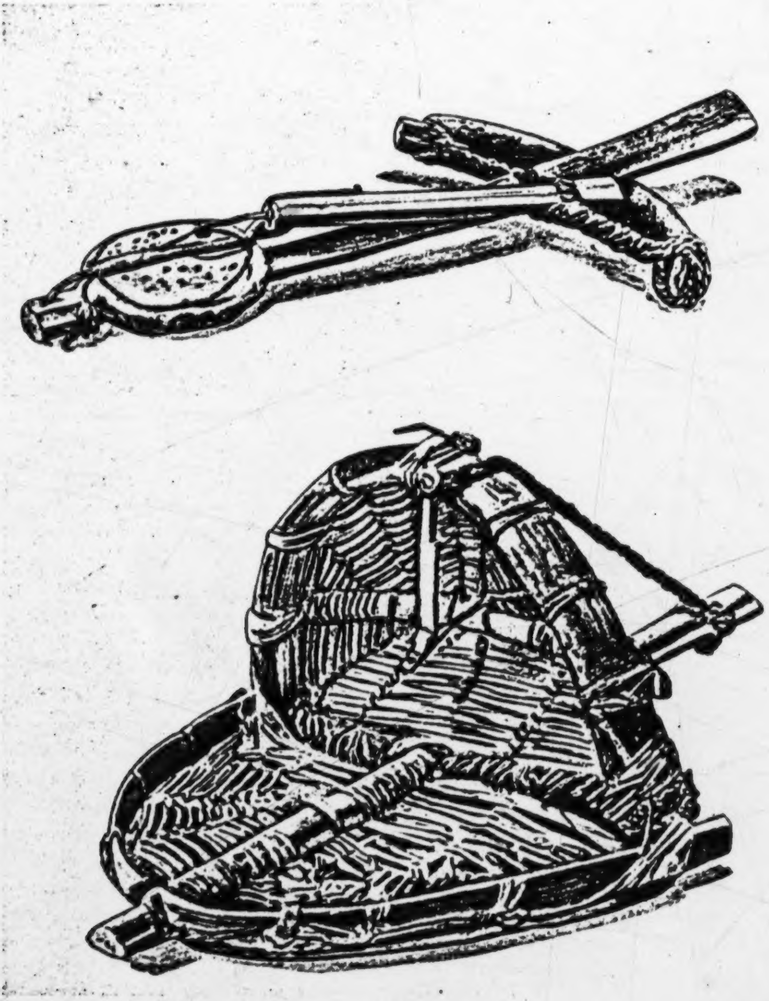

Fig. 114a–b.

a. Torsion trap of the *tenderbat* type used among the Tuareg. From the Sahara (Mérite 1942, Fig. 59).

[564] b. Torsion trap provided with a net. This trap is known to most sedentary agriculturists of the Sahara but it is not used by pastoral Tuareg (Mérite 1942, Fig. 60).

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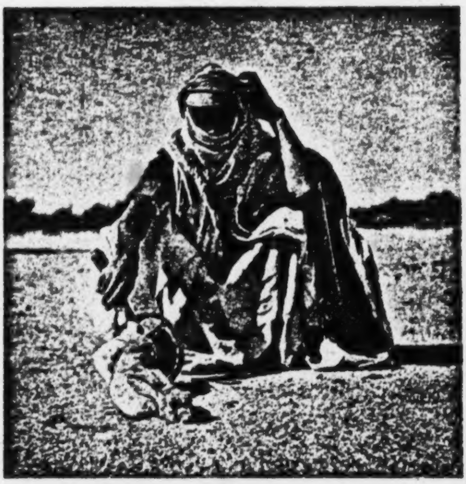

Fig. 115. Negroid agriculturist (*Ḥartani*) with a hare caught in a steel-trap (*elkheniyet*) of European type. Ahaggar.

262 by many people in vassal tribes, and jackal's meat is popular as it is considered an excellent remedy
565 against fever (cf. Nicolaisen 1961, p. 146). But there are also many Tuareg who refuse all types of game
[757] with the exception of such animals as gazelle, barbary sheep, and antelope. Some Tuareg consider
hare's meat unlawful, but this, perhaps, is a conception introduced with Islam, for many people of
the religious *Ineslemen* class claim that hare should not be eaten because their blood resembles that
of menstruating women. The food taboos strictly followed by all noble Tuareg are older than Islam:
they never eat birds, eggs, reptiles, and fish.

These rules are not traditional for vassal Tuareg, though some of them have adopted the taboos of the noble Tuareg.

224 In Northern Tuareg areas two big lizzard types are found. One of them is called *aggezzeram* (*dobb*
564 in Arabic; *Uromastix acanthinurus*). This is caught and eaten by slaves, agriculturists, and by many
565 vassals. It is frequently taken by hand, but there is also a special implement (*taskumt*, *takoḍa*) consisting
262 of a stick provided with an iron crook for catching lizzards hiding in holes and under rocks. When
[432] vassal Tuareg are able to catch a great many *agezzeram*-lizzards they cut them up and dry them for
[434] sale on their regular trading expeditions in autumn to the sedentary agriculturists of Tidikelt (cf. p. 210).
The *agezzeram*-lizzard is said to be the ancestor (the mother's brother) of the negroid blacksmiths
(*Ineḍen*), because the lizzard's tail resembles a file. I do not know whether the few blacksmiths found
in Northern Tuareg country eat this lizzard, but do not think they do. The lizzard is not considered
very delicious, and blacksmiths have emigrated from the south where it is not generally eaten.

The other edible lizzard is named *aṛata* (*Varanus* sp.). It is much bigger than the *agezzeram*-lizzard just mentioned, and its meat is excellent according to the taste of most Europeans. But this big lizzard

is refused by noble Tuareg and in general also by vassals. One reason for this is that the Tuareg have 224
a myth saying that the *aṛata*-lizzard is the ancestor (the mother's brother) of the noble Tuareg. Some 565
vassals claim that it is the ancestor of all true Tuareg, but this statement does not agree with mythology 564
(cf. Benhazera 1908, p. 61). However, this lizzard is eaten mainly by slaves and by certain agriculturists, 262
though its meat is considered a remedy against snake-bite and scorpion stings (cf. Lhote 1951a, 757
p. 168 f.). The head of an *aṛata* is considered an excellent amulet against these poisonous animals 757
(Lhote 1951a, p. 168 f.), and the skin of this lizzard is not only utilized for the manufacture of amulet 237
cases but also for small bags of various types (Fig. 116a).

Small animals are not necessarily killed with any particular hunting implement. The animals may 224
be taken with the hand or killed with sticks and stones, as is the case with the hedgehog (*ékenisi*, 262
tékenisit), which is eaten by some people, and with small rodents. Even hares can be taken with the hand when they hide in the grass or under rocks. The hunter may then approach the hare swinging one of his sandals over his head. This, it is said, makes the animals believe that it is hunted by a hawk or an eagle, and it will therefore remain stubbornly in its hiding place. Even gazelle are sometimes taken without any proper hunting weapon. Some Tuareg say that on journeys through the barren desert country in the summer they have met gazelle so exhausted from thirst that they could take these animals with their hands. Although this is rarely possible, I know Tuareg who have crept up to gazelle hiding from the sun in daytime and killed them with a stone. Finally it can be mentioned that the

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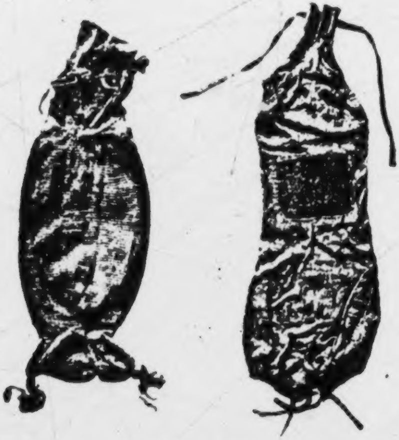

Fig. 116a–b. Two small skin bags.

a. Skin bag (*abelboḍ n aṛata*) made from the skin of the big *aṛata* lizzard (*Varanus* sp.). Ahaggar, *Ḥarratin* of Taṛhawhawt. Dimension: 0.325 m long. (N.M. G. 5834).

b. Skin bag (*abelboḍ n témerwelt*) made from hare-skin. Ahaggar, bought from *Ḥarratin* at Taṛhawhawt, manufactured in the *Aġuh-en-tehlé* tribe. Dimension: 0.350 m long. (N.M. G. 5833).

224 Tuareg are also aware of the use of poison. I have gathered no information about this myself, but [824] Lhote states that certain poisonous grain is used for the destruction of jackals and small rodents (Lhote 1951a, p. 43 f. & 132).

226 It is obvious that fishing cannot be an important industry to people of the Sahara, but fishing is practised in certain areas. One species of fish (*Clarias Lazera*) is found in a few permanent pools of Central Ahaggar, but it is particularly common in the numerous permanent ponds of Tasilé-n-Ajjer, where there is also another, perch-like species. I have myself caught and eaten both species. Duveyrier states that there are three distinct species in Tasilé-n-Ajjer:—(1) *asoulmeh* (*asulmey*) (*Clarias Lazera*); (2) *isattafen* (*i-seṭṭefen*); (3) *imanan* (pl. *imenan*) (Duveyrier 1864, p. 227, 238). Fishing is described [262] by Duveyrier as follows: "Les poissons des lacs de Mihero donnent lieu à une pêche qui contribue [565] à l'alimentation des serfs riverains. A cet effet, ils creusent sur les bords des lacs de petits canaux étroits, aboutissant à des réservoirs dans lesquels les poissons viennent pour y chercher une nourriture qu'ils ne trouvent pas dans les profondeurs des lacs. Quand ils y sont entrés on renferme les conduits et on les prend" (Duveyrier 1864, p. 238 f.). Another fishing method is described by Lhote: "Ils construisent des espèces de fascines avec des tiges de mrokba ou des branches de tamarix, puis, entrant à plusieurs dans l'eau ils forment une espèce de barrage au moyen de ces fascines en les mettant bout à bout et les poussent ensuite doucement devant eux. Ils prennent bien soin de drainer le fond de sorte que le poisson soit systématiquement chassé. Lorsqu'ils arrivent près de la rive opposée à celle d'où ils sont partis, ils poussent rapidement par un dernier effort et éjectent le poison sur le sable ou ils le ramassent. Ils recommencent ce manège plusieurs fois jusqu'à ce qu'ils aient capturé la majorité des poissons" (Lhote 1951a, p. 53). In Tasilé-n-Ajjer I was told about a third fishing method, namely the use of a piece of cotton (e.g., an old cotton shirt) attached to two poles. The cotton piece serves as a net over which the fish are fed. There seem to be no other fishing methods, as both the fish-hook and the harpoon are unknown.

AYR

136 The Ayr Massif with adjacent plains is very rich in game in comparison with the true desert country inhabited by the Northern Tuareg. Barbary sheep (*éjital*; *Ammotragus leṛvia Angusi*) are common in the mountains and also south of the Massif around the cliff known as *Falaise de Tigeddi*. Gazelle (*achenkod*; *Gazella dorcas* sp.) (*énir*; *Gazella dama permistà*) and the addax antelope (*amellul*; *Addax nasomaculatus*), which are found in Northern Tuareg countries, are more abundant in Ayr where there are also bigger types of game, notably the oryx antelope (*ézem*; *Aegoryx algazel algazel*), and the giraffe (*amdeṛ*; *Giraffa camelopardalis*) which is found south and southwest of the Massif (e.g., around Ingal and Aderbissinat). The ostrich (*énhal*; *Struthio camelus*) is still very common in isolated regions of Ayr including the northern outskirts of the mountains, where I have seen flocks of more than twenty birds. There are in Ayr as mentioned above (p. 31) many bird species which are unknown or rare further north in the desert, e.g., the guinea fowl (*taylalt*; *Numida clappertoni clappertoni*) and a bustard species (*agayis*; *Choriotis arabs stieberi*). Game birds are extremely abundant in certain parts of Ayr. The birds come in amazing numbers to waterholes and open wells to drink in the evening at

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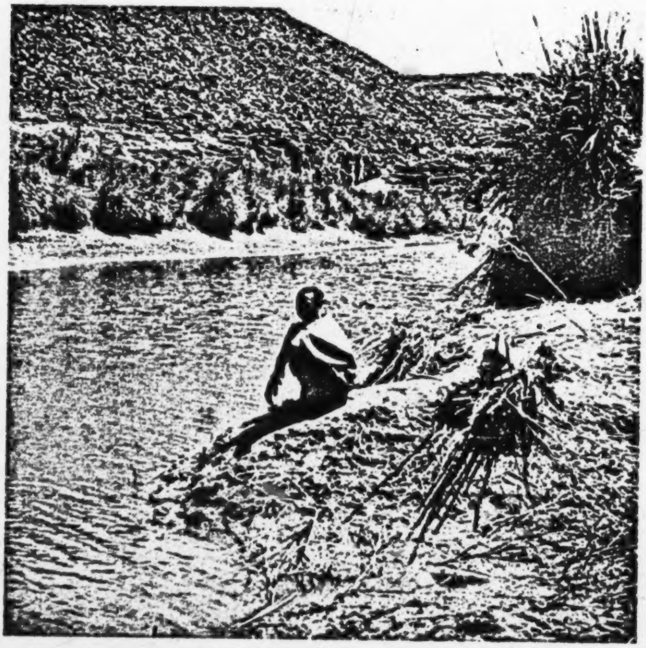

Fig. 117. Fishing pool (*aġelmam*) in Tasilé-n-Ajjer.

136 sunset. There are wild pigeons by the thousand and innumerable flocks of guinea fowls and partridges
(*Alectoris* sp.). Two species of turtle-dove are almost as common in Ayr as is the sparrow in Europe.

224 Possibilities of hunting are much more favourable in Ayr than in Northern Tuareg countries, yet,
[410] nevertheless, the Ayr Tuareg engage even less in hunting than do the Ahaggar Tuareg. One reason
for this is perhaps that very few Ayr Tuareg possess guns. It is extremely rare to meet hunters in Ayr.
224 They are found mainly within one tribe, namely that of *Imedderaren* (or *Kel Tamgak*) living in the
433 Tamgak Mountains of Northern Ayr. I have myself never visited camps of these people, but all Tuareg
agree that they live largely as hunters and possess few domestic animals. Unfortunately, these people
[214] have never been studied in detail. Buchanan, who met a hunting band of these Tuareg in 1920, says
[222] that they have neither goats nor grain, but live by hunting and the collection of wild edible plants
(Buchanan 1921, p. 191), while Campbell, who met them at Iferwan in 1926, describes them as hunters
who also breed goats and sheep (Campbell 1928, p. 204 f.). Rodd also states that the *Kel Tamgak*
have goats and sheep, but that they do not possess camels (Rodd 1926a, p. 307). This is in agreement
with information gathered by myself at Iferwan where I met a few Tuareg of this group. There are
224 no Ayr Tuareg who live exclusively by hunting and collecting. The number of game animals killed

224 annually among the Ayr Tuareg is apparently also a low one. Brouin estimates that about 200 oryx antelopes, 3–10 of the protected giraffes, and 100–1000 gazelles are killed annually by native hunters within the Cercle d'Agadez (Brouin 1950, p. 435).

Traditional hunting methods in Ayr are as follows:—

[411] [177] (1) Hunting by means of the spear (*taṛda*). This weapon is fitted with a wooden shaft like the hunting spear used in Ahaggar, but the slender barbed spear of the Tebu is also used by many Ayr Tuareg.

(2) The use of stalking animals. Cf. the Ahaggar Tuareg above (p. 158 f.).

(3) Hunting in disguise. The Ayr hunters employ a disguise of straw. Bundles of straw are attached to the hunter's body, and the hunter furthermore carries a big straw-bundle in each hand. Walking in a bent position he is able to approach the game (gazelle and antelope) in this way. It is very probable that skin-clothing has also been used as a disguise (cf. Brouin 1950, p. 447 f.).

(4) The running down of game animals by men mounted on camels or horses is a method rarely employed within the Ayr Massif, though practised by certain Tuareg inhabiting the southern plains.

(5) Hunting with dogs. This is practised in the mountains. Barbary sheep are attacked and surrounded by the dogs, and normally killed by means of the spear. – It is said that a hunter having no dogs at his disposal can make a barbary sheep stop if he barks like a dog.

(6) Hunting by driving the animals into closed river valleys. The method is said to be used for

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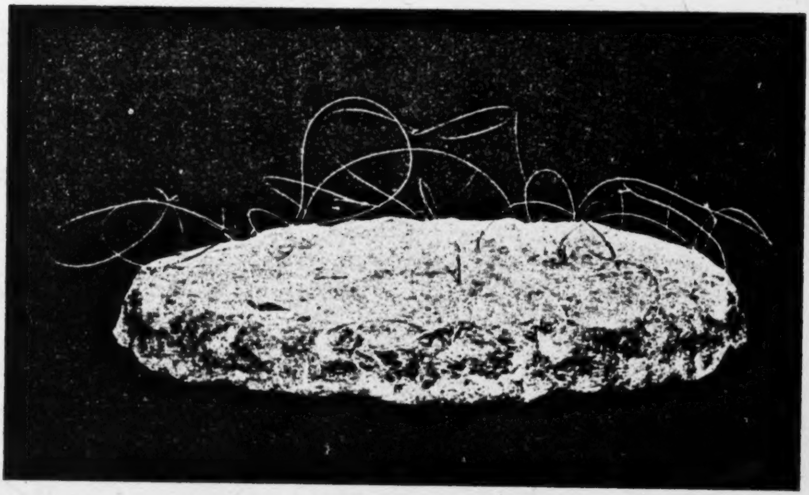

Fig. 118. Snares (*t'izagin*, sing. *tazek*) made from hair and inserted into a piece of sun-dried clay. Used for little birds which are fed with millet placed upon the piece of clay. Ayr, boys of the *Imeggedezen*. Dimension: 0.15 m in diameter. (N.M. G. 6622).

catching wild donkeys in the mountains around the valley of Anu Meḳḳeren. The method is not used for proper game animals. 224

(7) A pulling and a throwing snare are both known as *tuṛunt*. They are said not to be used for hunting, though commonly employed to catch wild donkeys and domestic animals which have gone astray; cf. p. 108 f.

(8) The spiked wheel-trap (*tawchit*) provided with a noosed rope (*tuṛunt*) attached to a stick. This is used for gazelle and bigger game animals in isolated places rarely visited by representatives of the administration. According to Buchanan, the spiked wheel-trap is used for ostriches in the plains south of Ayr (Buchanan 1921, p. 117 ff.). Large traps of this type are also used for giraffe by certain hunters within the Cercle d'Agadez (Brouin 1950, p. 453).

(9) The torsion trap (*tenderbat*) akin to that of Ahaggar. It is used for big game animals, notably for barbary sheep.

(10) Snares (*tazek*, pl. *t'izagin*) made from strips of dụm palm leaves are used for guinea fowl and [223]
other edible birds. They are generally set near water where birds come to drink. Little boys of the [257]
negroid *Imeggedezen* of Agadez also make snares of hair to catch small birds (Fig. 118).

These are the hunting methods known to the Ayr Tuareg, who do not engage much in hunting with the exception of the *Kel Tamgak* mentioned above. Most Ayr Tuareg refuse the small types of 262
game and beasts of prey, and reject not only the *aṛata* lizzard (*Varanus* sp.), but also the smaller lizzard known in Ahaggar as *aggezzeram*, in Ayr as *emekkechchu* (*Uromastix acanthinurus*), though it is claimed that the latter is eaten among Tuareg of the *Kel Ewey* group. The two lizzards do not play any part in Tuareg mythology – the *aṛata* lizzard is greatly detested by the Ayr Tuareg who kill it with stones or sticks, whenever possible. The Ayr Tuareg, including those of noble descent, have no taboos about birds and eggs, and many pastoral Tuareg collect guinea fowl eggs late in summer after the rains. There are a few animals not mentioned above which are considered edible among the Ayr Tuareg, e.g., the tortoise (*afaras*) which is found in the plains south of the Massif. With the exception of the *Kel Ewey* Tuareg the people of Ayr do not collect locusts (*tahwalt* in Ahaggar, *achwal* in Ayr). Locusts are eaten by all people of the two Northern Tuareg groups. The animals are roasted in the ashes or [252]
are boiled in a cooking pot to be pounded in the large mortar together with dried dates. This dish is [832]
very esteemed by the women who say that it is fattening and in this way adds to their beauty.

Certain weapons have not been mentioned above because they either cannot be considered proper 411
hunting weapons, or because it is doubtful whether they exist among the Tuareg or not. [114]

Traditional Tuareg arms comprise an iron lance (*allaṛ*), a sword (*takuba*), and a dagger (*téleḳ*) carried in a sheath fastened to the left arm. The iron lance may serve as a hunting weapon, and this is true also of the sword. Thus the Ayr Tuareg of the *Kel Ferwan* group said that wild animals were occasionally killed with the sword, and they claimed that two Tuareg of the past had killed lions with this weapon.

The bow (Ahaggar, *taṛayyé* or *tagaññé*; Ayr, *taganzé*) and arrows (Ahaggar, *imurren*, sing. *amor*, or *tinassabin*, sing. *tanassabt*; Ayr, *imeran*, sing. *amer*) are not traditional Tuareg weapons. Nowadays [524]
very ineffective bows and arrows are used as toys by little Tuareg boys, but they are never used by

[text continues on p. 169]

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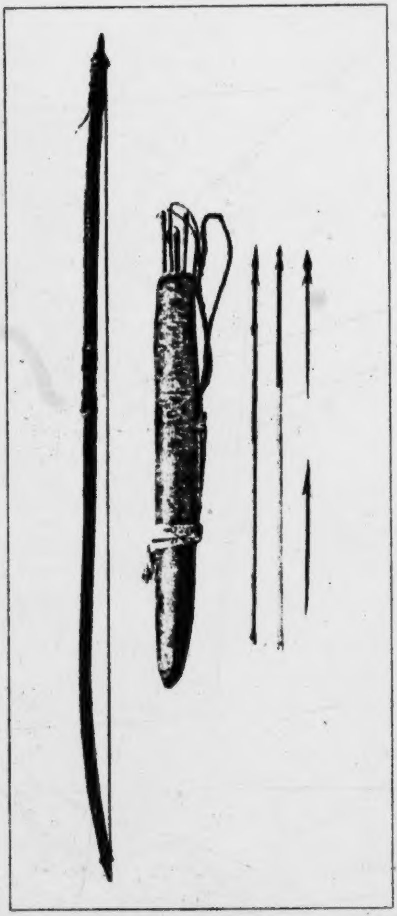

Fig. 119. Bow (*tagonzé*), arrows (*imeran*), and quiver (*éhamaren*) from the Hausa-speaking population living south of Ayr around Aderbissinat. The bow is made from wood of a tree called *édinen* and has a string of ox-hide. The arrows have shafts of wood or reed; their iron points are made by blacksmiths. The quiver is made from ox-hide with a plaster of cow's excreta applied to the inner side. Dimension of the bow: 1.20 m. (N.M. G. 6621).

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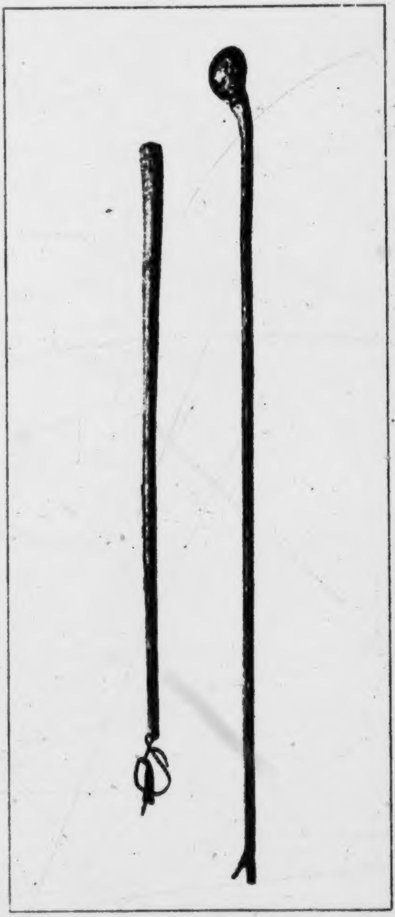

Fig. 120. Tuareg clubs.

a. Wooden club (*aburi*). Dimension: 0.995 m long. (N.M. G. 1.159). Ahaggar, Olufsen's Collection.
b. Wooden club. Used for weapon and for cattle-driving by Tuareg around Timbuktu. Made from a bough of *Combretum aculeatum*. Collected by O. Hagerup. Dimension: 1.39 m long. (N.M. G. 3086). All slaves I saw among the *Iwllemmeden* near Ayoru carried this weapon.

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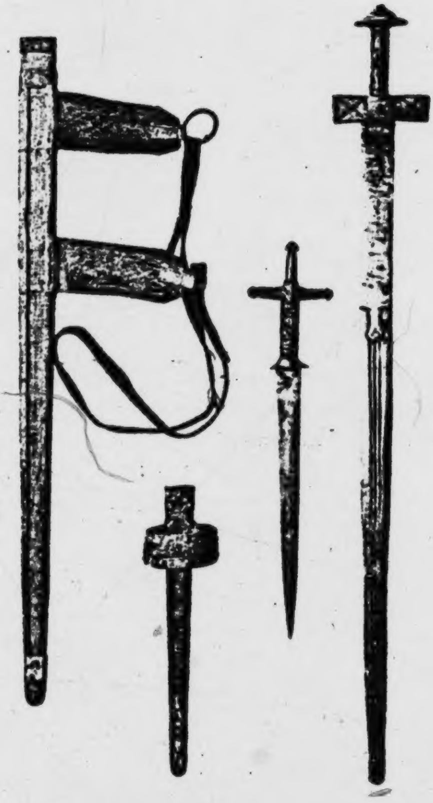

Fig. 121 a–b. Tuareg sword and dagger from Ahaggar.
a. Sword (*takuba*). Dimension: 0.925 m. (N.M. G. 1.141).
b. The so-called arm-dagger (*télek*). Dimension: 0.475 m. (N.M. G. 1.145).
Olufsen's Collection.

adult people, though bow and arrows like those depicted Fig. 119 are in general use among the Hausa and the Fulani within the territory inhabited by the Ayr Tuareg. It is very possible that bow and arrows were used as weapons among the Tuareg in the past when fire-arms were uncommon. This is claimed by certain older authorities, but it seems as if the weapons were manufactured in Damergu south of Ayr where the bow is traditionally used by negroid peoples (cf. Duveyrier 1864, p. 445, pl. XXV, 411 [174]

411 p. 447; Bissuel 1888, p. 94 f.; Harding King 1903, p. 272, photograph opposite title-page; Rodd 1926a, p. 235; Lhote 1955a, p. 375).

In Ayr I collected evidence of the fact that the sling known as *éfezemfes* was very common in former days. It was made from plaited dum palm leaves, but the Tuareg claim that it was not a hunting weapon, as it could not be used with precision. For the same reason, it is said, the sling could not be used for herding domestic animals – there would be a great risk of wounding them. [524] It seems as though the sling among the Ayr Tuareg was used mainly as a toy. It has apparently disappeared, and a Tuareg of the religious *Ineslemen* class told me that the sling was a bad thing to use, because of a story in the Koran of a sling that was once used to throw a man into the fire. I do not know whether the sling is, or was, used among the Northern Tuareg, but think it very likely. [171] The sling has an extremely wide distribution in Africa, and it has been recorded from various northern Berber tribes and from the Fezzan (cf. Lagercrantz 1950, p. 214 ff.).

The Tuareg of Ahaggar and Ayr, like pastoral Arabs of Algeria, frequently carry a short, heavy stick (*aburi*). A stick of this kind is sometimes used as a throwing stick, or throwing club, by Tuareg and Arabs, but cannot be characterized as a proper throwing stick. It is only occasionally used as a hunting implement thrown against birds and small animals and serve many different purposes. I believe that most Tuareg carry such heavy sticks as a weapon for personal protection and for killing [114] poisonous snakes. In literature it is stated that true throwing clubs or throwing sticks occur among the Tuareg (cf. Lindblom 1925, I, p. 117, 137 f.), but they seem to be unknown both in Ahaggar and in Ayr. A large wooden club, collected at Timbuktu by O. Hagerup and now in the National Museum (Copenhagen), is rather to be considered a weapon than a hunting implement (cf. Fig. 120 b). The throwing knife that is sometimes stated to be a Tuareg weapon is not traditionally used by these [172] people. A rare throwing knife may be introduced into Ayr from the Teda together with spears and knives of Teda type (cf. Lagercrantz 1950, p. 202 f.).

224 Hunting may have been important to many Tuareg in the past when game was more abundant. To-[184]day true hunters are found mainly in tribes living in isolated and mountainous regions, notably among the *Kel Tamgak* or *Imedderaren* (Ayr), and among the *Dag Rali* (Ahaggar). It is very interesting [311] that proper hunting territories are found within the territory of the *Dag Rali* tribe, and it is significant that it is strictly forbidden to graze domestic animals withing two hunting territories where barbary sheep are also protected for a period of three months every year (cf. p. 148). 224 825 It is also interesting that the Tuareg have certain age-terms which are used exclusively for game animals. Thus the Ahaggar Tuareg have three age-terms for gazelle:—

Age	Male	Female
Kid from its birth to the appearance of its horns . .	*awhim*	*tawhimt*
Animal not yet fully grown having small horns . . .	*ahyar*	*tahyart*
Fully grown animal	*ahenkoḍ*	*tahenkoṭ*

224 Certain superstitious usages and beliefs are connected with hunting among the Tuareg:—

754 777 (1) When a gazelle is killed its black tail-tuft is immediately cut off and placed in one of the animal's nostrils (Fig. 122). This is common practise among all Tuareg and also among Arabs of the Sahara.

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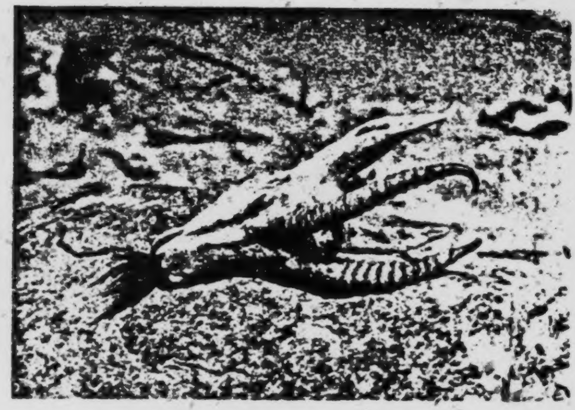

Fig. 122. Gazelle's head with the black tail-tuft inserted into one of the nostrils as a remedy against the mystic evil power called *ettama* (*tezma*). Tasilé-n-Ajjer.

This custom is believed to afford protection against the mystical power known to the Ayr Tuareg as *ettama*, or *tezma* – an evil power possessed by certain Tuareg and by all blacksmiths (cf. p. 21). A person who possesses this evil power may, if he does not receive part of the booty, spoil the hunter's luck when seeing the killed gazelle. The tail-tuft put into the animal's nostril eliminates this risk.

(2) When a hunter returns to his camp with booty he should not show the killed game to other people, and if asked about the results of his hunting trip he should deny that he has had any luck. This custom is also explained as being a protection against the evil power *ettama* (*tezma*) just mentioned.

(3) When a man leaves his camp for a hunting trip he must not talk about it, nor must it be mentioned by other people. This belief has its root in the conception of the "evil mouth" (the "evil eye") known in Ayr as *tugarchet*, in Ahaggar as *tehoṭ*.

(4) If a hunter has given meat from his killed game to another man, the latter should not praise it. This belief is due to the belief in the "evil mouth" – the belief that a man's luck can be spoiled by praise.

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777 (5) In a *Dag Ṛali* camp I have noticed that a piece of bone of a barbary sheep was conserved in a skin bag. I was told that this was done in order that the hunter might have good luck in his future hunting of barbary sheep.

[825] (6) Certain omens bring good luck in hunting as well as in other projects, e.g., to walk between two black ravens (Ayr), or to see two black ravens (Ahaggar); to see a jackal; to see the hawk called *alullam*; to see three gazelles.

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787 (7) The Tuareg have various methods of divination some of which are frequently used in connection with hunting. The hunter will frequently inquire into the result of a planned hunting trip by means of a method known in Ahaggar as *igehan*, in Ayr as *igazan*. In brief the method is practised as follows:— The diviner presses his thumb or his forefinger quickly into the sand to make two rows of holes close to each other. He does not know ahead how many holes he has made in the two rows. He counts

224 the number of holes in each row and makes a special sign in the sand for even and uneven numbers. 787 There are four possibilities of different signs:— (1) A sign called *tezli* if there is an uneven number of holes in both rows; (2) A sign known as *élélli* if there is an even number of holes in both rows; (3) A sign, *eggur*, if the number of holes is uneven in the right row, but even in the left row; (4) A sign, *tamayit*, if the number of holes is even in the right row, but uneven in the left. The diviner makes two rows of holes six times successively. Each time he makes one of the mentioned signs according to the distribution of holes, and the result of his divination depends upon the character of the signs and their relative position to each other (cf. Nicolaisen 1961, p. 151 f.). – The Tuareg have other methods of divination which are perhaps also used to predict the result of planned hunting trips. They also [262] know to take omens from the shoulder-blades of wild and domestic animals. When a hunter has killed a gazelle he will often keep the shoulder-blades for himself, and having eaten the meat he will take omens of future happenings from the structure of these bones. Such shoulder-blades will not be thrown to the dogs – they are hidden under rocks and stones (cf. Nicolaisen 1961, p. 150 f.).

224 Some of the above mentioned usages and beliefs have been mentioned also by Lhote (Lhote 1951a, p. 180 f.), who has noted a few other customs connected with hunting:—

[825] (8) If a hunter kills a snake he will get nothing. (A particular snake species known to the Ahaggar Tuareg as *émegel* is never killed, as it is considered "sacred" and is referred to as a "marabut").

(9) If two men hunt together, but separate to meet later, the man who comes upon the other must not receive food from him.

(10) Handling the skin of game animals one must not put fingers into a bullet hole. This would cause bad shooting or accidents on future hunting trips, and the rule is observed even with tanned skin.

A few other superstitious usages have been recorded from Ahaggar by Captain Florimond (Rapport Annuel. Ouargla 1940). They are here quoted from Lhote 1951a, p. 180 f.:—

(11) Hunters of the *Dag Ṛali* take omens from the breaking of sandal straps in the pursuit of barbary sheep. If the straps passing between the toes break the hunter will kill a male, while he will get a female animal if the side-straps break.

[776] (12) When Tuaręg of the *Kel Mertutek* (*Dag Ṛali*) leave for a hunting trip they put a stone or pebble on their heads and utter an invocation to hunting spirits which is rapidly repeated ten times.

(13) When *Dag Ṛali* Tuareg set out hunting they take with them a stone from a pre-Islamic tomb. When game is seen they throw this stone far away crying at their dogs: "Go! What you kill shall be *ḥallal* and lawful!"

[777] (14) When a barbary sheep has been killed by people hunting with dogs, the head of the animal is cut off and thrown on the fire while the following words are uttered:— "The smell from the burned skin of the head of the barbary sheep shall forever flatter the hunter's nostrils so that he may have good luck in future hunting also!" Tuareg of the *Kel Mertutek* will add:— "I have taken you from the *Kel Asuf* and I have taken only the blessing they have sold you that you may soon be followed by your peer!"

(15) At the partition of killed game the meat must be handled with slow motions. If not, the dogs will lose their fierceness.

(16) It is believed that a hunter should fix a burning piece of wood in the soil by the fire in which

his game has been prepared. If this wooden piece is removed by another hunter he will spoil all the 224
hunting luck of the first hunter, who will then have to find the offender and spit three times between [777]
his shoulders in order to regain the lost hunting luck. If he does not find the offender he will give all
his hunting dogs the following treatment:— Black powder is set on fire, and one ear of every dog is
held close to the burning powder so that the dog will cry as loudly as possible. The same treatment
is applied to the dogs in case anybody has handled the meat of game with rapid motions.

There can be little doubt that some of these superstitious usages are pre-Islamic, and it seems as [776]
though there is a certain connection between hunting rites and the *Kel Asuf* spirits corresponding to
the *jinns* of the Arabs. This is also quite natural in view of the fact that these pre-Islamic spirits are
believed mainly to inhabit the isolated areas preferred by game animals (cf. Nicolaisen 1961, p. 125 ff.).

Game animals should always be killed ritually by cutting the throat like domestic animals (cf. p. 231). If an animal is killed by a rifle bullet, its throat is cut as quickly as possible, but the Tuareg say that even an animal killed in this way die "slowly" and that its death is not accomplished until the throat is cut. If a knife is lacking the Tuareg sometimes use a stone to beat open the throat of birds such as pigeon and guinea fowl.

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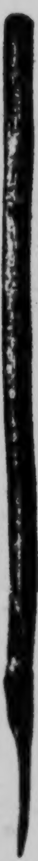

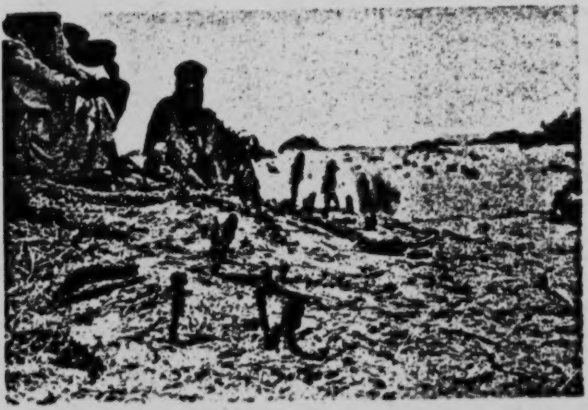

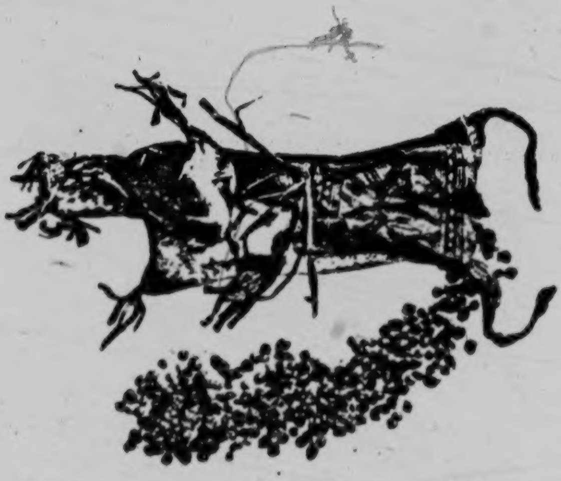

Fig. 123. Digging stick (*élawej*) which serves to dig up wild edible roots and other purposes. Ahaggar, the *Dag Ɣali* tribe. Dimension: 0.883 m (total length). (N.M. G. 5252).

Fig. 124. The wild plant *thahelewen* (sing. *ahahel*) (*Cistanche Phelypaea*) which yields edible roots esteemed for food (bread). Tasili-n-Ajjer.

Fig. 125. Skin bag of the *téchehékwat* type made from the skin of a kid and containing *adamam* berries (*Osyris alba*). The berries are normally eaten fresh, but are also conserved in skin bags to be eaten later after soaking in water. Ahaggar, the *Dag Ɣali* tribe. Dimension of the skin bag: 0.33 m. (N.M. G. 5244).

Collecting

In this chapter on collecting such edible plants are mentioned as play a part in Tuareg nourishment. 222
Wild plants are also collected for other purposes. Many species are important to craft or have a medicinal 824
value. Some of these latter species are mentioned elsewhere in this study.

EDIBLE PLANTS OF THE AHAGGAR AREA

Wild plants which yield edible fruits, seeds, stems, or roots in Ahaggar comprise more than fifty 222
different species. But the importance of collecting should not be judged from this, as all these plants [262]
are never found within the same area, and most are eaten only occasionally as a kind of relish or when
agricultural food (wheat, barley, millet, dates) is lacking. I have supplemented my own list of edible [114]
plants with important information from Maire's study of Ahaggar botany (Maire 1933 & 1940). In
my list the letters Tr., L.M., and U.M. stand for Maire's botanical zones, namely the Tropical Zone, [137]
the Lower Mediterranean Zone, and the Upper Mediterranean Zone. The following edible plants
are collected in Ahaggar and adjacent regions:—

tirfas (sing. *tarfest*) (*Terfezia ovalispora*). Tr., L.M. A fungus which, according to Maire, lives on 222
the roots of *Helianthemum Lippii* & *H. ellipticum* known to the Tuareg of Ahaggar as *urruǧ* (Maire 262
1933, p. 22, 159 et suiv.). This white fungus, which is frequently termed *tirfas n urruǧ* by the Tuareg, 252
is prepared for eating together with various other dishes. It is frequently added to the so-called kus-kus.

tahlé (*Typha elephantina*) Tr. Roots and certain lower parts of the stem are eaten raw or boiled. When vegetable food is scarce they are also pounded or ground into flour.

akeywoḍ (*Typha australis*) Tr., L.M. Roots of this plant are ground into flour.

téseñgelt (*Saccharum Ravennae*). Tr., L.M. "Cette plante . . . laisse très souvent exsuder un liquide sucré qui se concrète en masses plus ou moins cristallisées; les Tuareg utilisent ce sucre" (Maire 1933, p. 54).

afeẓu (*Panicum turgidum*). Tr. A perennial grass extremely common in the lower valleys of Ahaggar.
Seeds are collected in receptacles (e.g., *ahaǧa*, Fig. 213) by beating the ears of the grass with a stick.
The seeds are not suitable for bread, but are esteemed for porridge and *tébik*, that is seeds pounded
in the mortar and eaten without further preparation. Ashes of this grass contain soda and are often [276]
mixed with tobacco for chewing.

222 *aɣemmud* (*Aristida plumosa & A. Adscensionis*). Tr. Seeds are edible.

262 *tullult* (*Aristida pungens*). Tr. A perennial grass found in certain parts of Ahaggar and particularly
252 common further north (Ahnet, Immidir) and in Tasilé-n-Ajjer. Seeds are collected by men and women in the following manner:— The ears are cut with a sickle and placed in a piece of cotton (e.g., a cotton blanket known as *abroɣ*). The ears are left for drying, and threshing is done by beating with a stick. The husks are winnowed as described for wheat and barley (cf. p. 206), and seeds are then stocked in *ağera* (a skin-bag). According to Foucauld collecting may also be done by digging out the nests of
[412] ants as these small insects stock a great many *tullult* seeds (Foucauld 1922, p. 29 f.). – The *tullult* seeds are used for bread and porridge, and are also eaten as *tébik* after pounding in a wooden millet mortar.

lewliwen (*Scirpus maritimus*). An annual plant having edible fruit in its roots (cf. Foucauld 1951–52, III, p. 1098).

taleggit (*Juncus maritimus*). Tr., L.M. Young shoots are edible.

izéyan (*Asphodelus tenuifolius*). Tr., L.M. Eaten when vegetable food is scarce.

telokat (*Ficus salicifolia*). Tr. "Les fruits murs, de couleur rouge, sont tendres, un peu sucrés et comestibles" (Maire 1933, p. 76).

[574] *adamam* (*Osyris alba*). (Tr.), L.M. Its red fruits or berries are eaten as a relish. A bowl of berries is frequently offered to guests of Tuareg camps.

tanesmimt (*Rumex vesicarius & R. roseus*). Tr. Inedible according to Foucauld (Foucauld 1922, p. 85), while Foley states that leaves of this plant are eaten after boiling (Foley 1930, p. 42).

tawit (*Chenopodium Vulvaria*). (Tr.), L.M., U.M. An annual herb which is particularly common in the mountain of Asekrem. The small black seeds are collected in bowls or similar receptacles by rubbing the plants with the fingers. The seeds are ground into flour, which is very suitable for bread and porridge.

aramas (*Atriplex Halimus*). Tr., L.M., U.M. Seeds and boiled leaves of this plant are eaten when vegetable food is very scarce.

ébedébed (*Boerhavia agglutinans & B. repens*). Tr. An annual plant with edible seeds.

éhéyefyef (*Aizoon canariense*). An annual plant resembling the *twuit* plant and particularly common in the upper mountain zone. Seeds are used for bread and *tébik*, but not for porridge.

ağar (*Maerua crassifolia*). Tr., (L.M.). A tree yielding edible fruit.

tadant (*Boscia senegalensis*). A tree or bush which is extremely rare in Ahaggar where its edible fruit are consequently consumed very rarely.

aggasit (*Farsetia Hamiltonii*). Tr., L.M. A seed-plant.

ahereẓa (*Alyssum libycum*). An annual plant which is rare in Ahaggar, while common in Tasilé-n-Ajjer. Eaten after boiling in water.

azezzeğa (*Diplotaxis acris*). The plant is rare in Ahaggar. Its leaves are boiled and eaten.

tanekfayt (*Eruca sativa*). Tr., L.M. Leaves are eaten raw or boiled.

tamaghé (*Moricandia arvensis*). (Tr.), L.M., U.M. An annual plant ≐ a kind of wild cabbage.

alwat (*Schouwia purpurea*). Tr. An annual plant. "Les Touareg mangent la feuille cuite et essorée, sans sel. La plante jeune donne une salade assez analogue à la Roquette, quoique d'un goût moins agréable" (Maire 1933, p. 111).

abellenḡaḍ (*Reseda villosa*). Tr., L.M., U.M. Seeds of this plant are edible, but of bad taste – 222 according to Foucauld 1951–52, I, p. 65. 262

abseṛ (*Acacia Raddiana*). Tr., (L.M.). Fruits are collected mainly for goat fodder, but are eaten by 252 human beings when vegetable food is scarce. The fruit is then crushed into flour. The resin of this acacia is also edible.

tamat (*Acacia seyal*). Tr. The resin (*taynwst*) is edible. I believe it is used mainly as a remedy against [757] stomachache. This is perhaps also true of the resin of the *abseṛ*-acacia mentioned above.

ahtes (*Acacia albida*). Tr., L.M. "La gousse est même comestible pour l'homme" (Maire 1933, p. 120).

ténefé (*Tephrosia leptostachya*). Tr. "Les Touareg mélangent cette plante desséchée au thé vert" [272] (Maire 1933, p. 125).

laġul (*Alhagi maurorum*). Unknown in Ahaggar, but found in Tasilé-n-Ajjer. "Les racines tuberisées sont mangées par les indigènes (Killian)" (Maire 1933, p. 131).

aloṛa (*Peganum Harmala*). Tr., L.M., U.M. An annual seed-plant. Seeds are used for *tébik*.

taburaḳ (*Balanites aegyptiaca*). Tr., L.M. A tree having edible fruits which are macerated in water to remove the bitter taste.

tedjoq (spelling according to Maire 1933, p. 241) (*Pistacia atlantica*). L.M. Very rare according to Maire (1933, p. 148). According to my own observations the fruit of this tree is eaten by Arab [171] pastoralists (e.g., *Ulad Nail*) of the so-called *daya* region south of the Sahara Atlas. It is possible that it is also eaten by the Tuareg.

tahunek (*Rhux oxyacantha*). Tr., L.M. A tree having edible fruit.

téhaḳ (*Salvadora persica*). Tr. A tree with edible fruit.

tabakat (*Ziziphus lotus* var. *Saharae*). Tr. The berries are crushed and mixed with millet flour.

ȧẓawa (*Tamarix gallica*). Tr., L.M. "La manne produits par ces arbres est receuillié par les indigènes qui l'emploient comme matière sucrante. (Voinot)" (Maire 1933, p. 156).

tabarekkat (*Tamarix aphylla*). Tr. "Les rameaux mannifères sont employés pour sucrer l'eau" (Maire [263] 1933, p. 159).

tafeltast (*Myrtus Nivellii*). (Tr.), L.M. "Les rameaux de ce Myrte sont récoltés par les Touareg, [439] *desséchés et exportés par sac entiers au Soudan et au Mzab, avec l'Artemisia judaica* ssp. *sahariensis*. [752] Ces deux plantes sont utilisées comme médicaments et comme condiments" (Maire 1933, p. 162). [263]

awkal (*Cynomorium coccineum*). Tr., L.M. A plant yielding edible roots which are dried and ground into flour (cf. Maire 1933, p. 163).

aséyar (*Anethum graveolens*). (Tr.), L.M., U.M. An annual plant. Its seeds are used as a spice and [272] for adding to tea.

takmezzut (*Teucrium Polium*). Tr., L.M. An annual plant used for adding to tea.

élel (*Nerium Oleander*). Tr., L.M. This plant is extremely venomous particularly so for camels, which die from eating its leaves. "La cendre de bois de *Nerium* est employée par les femmes du Tidikelt [261] pour se faire engraisser. A cet effet elles mélangent un peu de cette cendre avec des dattes pilées et du beurre, puis absorbent ce mélange dans du leben" (Maire 1933, p. 170).

aṛellachchem (*Solenostemma oleifoleum*). Tr. A perennial plant. Its leaves are used as a substitute [272] for tea.

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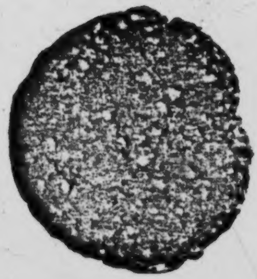

Fig. 126. A cheese-like mass of *adamam* berries (*Osyris alba*). The fresh berries are pounded in the large mortar (*tindé*) or are crushed between two stones to be formed into pieces of cheese form to be dried. This cheese-like mass of *adamam* berries is used by Tuareg women as a kind of face ointment against sun burn, pimples, and the like. They apply this ointment to the face as follows:— A little milk is poured upon a stone, the cheese-like mass of berries is rubbed against it, and the mixture of milk and berries is thereupon rubbed into the skin of the face with the fingers. Ahaggar, the *Dạg Ṛali* tribe. Dimension: 0.075 m. (N.M. G. 5279a).

222
262 *enag* (*Leptadenia pyrotechnica*). Tr. A tree with edible fruit.

[272] *tañhart* (*Mentha longifolia*). Tr., L.M. An annual plant. Used as an aromatic for adding to tea.

awit, generally known by the collective name *awihat* (*Salvia Chudaei*). Tr., (L.M.). An annual plant used as an aromatic for tea.

[824] *éfelehleh* (*Hyoscyamus muticus* ssp. *falezlez*). Tr. This plant is extremely venomous for human beings,
[682] though not for animals. In the past it was used by the Tuareg as a poison for enemies. Members of
La Mission Flatters (1880–81) were poisoned by the Tuareg using poison of this plant inserted into
[261] dates presented to the expedition. "La plante, absorbée à petite dose, aurait la propriété de faire
engraisser. Les femmes du Tidikelt l'emploient dans ce but, en en faisant cuire une petite quantité dans de l'eau avec de la farine et de la graisse; elles laissent réduire et absorbent la bouillie obtenue, puis se couvrent pour transpirer (Voinot)" (Maire 1933, p. 192).

222 *ahohel* (*Cistanche Phelypaea*). Tr., L.M. A plant yielding edible roots. After drying the roots are
262 pounded in a large millet mortar to be used for bread which is much esteemed by the Tuareg. "Cette
252 plante est recoltée jeune par les indigènes, puis placée dans le sable sous une couche de *drinn* (*Aristida
pungens*) jusqu'à noircissement et dessication. Le produit sec est moulu et utilisé dans l'alimentation (Voinot)" (Maire 1933, p. 196).

éfetekchi (*Orobanche aegyptiaca* & *O. cernua*). Tr., L.M. A plant yielding edible roots.

tamẓellit (*Orobanche sp.*). Tr. Very rare. A plant yielding edible roots.

teẹellet (*Colocynthis vulgaris*). Tr. Seeds are eaten after boiling and drying.

alkeḍ (*Cucumis pustulatus*). Tr. Rare. Seeds are eaten after boiling and drying.

[263] *takkilt* (*Cotula cinerea*). Tr. "Les Touareg utilisent cette plante comme condiment, principalement pour la viande qui commence à se gâter" (Maire 1933, p. 209).

[437] *téheréẹẹelé* (*Artemisia judaica* ssp. *sahariensis*). Tr., (L.M.). "Cette plante, comme le *Myrtus Nivellei*, est récoltée en grande quantité, séchée et exportée au Soudan, où elle est employée comme aromate et condiment" (Maire 1933, p. 212).

[272] *zézzeré* (*Artemisia herba alba*). (Tr.), L.M. Used as an aromatic for adding to tea.

ajako. According to Foucauld a small annual edible plant growing in the Ahaggar Mountains at an 222
altitude above 2000 metres (Foucauld 1951–52, II, p. 712). Maire mentions this plant as unindentified 262
(Maire 1933, p. 263).

Collecting is mainly the task of women, but males – particularly uninitiated boys and slaves – also 222
participate. Seed-plants are generally harvested by rubbing the ears of the plants between the fingers, [262]
but the *tullult* grass (*Aristida pungens*) is cut with a sickle (*amreh*; Fig. 143 a–b) to be thrashed and winnowed like wheat and barley. Edible roots are frequently collected merely by hand. However, a digging [412]
stick (*élaweġ*; Fig. 123) provided with an iron point is also used to dig up certain wild plants such as *ahahel* (*Cistanche Phelypaea*) and similar root plants. This digging stick is characteristic of vassal [525]
women who use it for many different purposes, e.g., to make holes for tent poles.

The very best among the above mentioned seed-plants is the *tullult* grass (*Aristida pungens*). Its seeds are collected or harvested by certain Tuareg inhabiting the lower parts of Ahaggar, but are important particularly to the Tuareg living in and around Tasilé-n-Ajjer. Within the Ahaggar Massif the most important seeds are those of *afeẓu* (*Panicum turgidum*) and *tawit* (*Chenopodium Vulvaria*). The right to collect these seeds is free to everybody, and Tuareg of the *Abada* zone may send their [567]
slaves to the *Atakor* zone to collect *tawit*-seeds in the mountain plateau of Asekrem. The species of [221]
afeẓu and *tawit* are sometimes protected by an ban on grazing for three and two months respectively in order that their seeds may grow ripe for collecting. The right to put a ban on grazing of the two [423]
species belongs to the Tuareg in whom territorial rights of a sub-area are vested (cf. p. 150). It is said that under very favourable conditions a single household may collect some hundred kilos of seeds of the two plants mentioned. This may seem rather impressive, but even in good years when milk is [262]
abundant collecting will not provide pastoral Tuareg of Ahaggar with sufficient vegetable food, for seeds of wild plants are far less nourishing than are grains of wheat, barley, and millet. The collecting of wild plants important for food is as dependent on climatic conditions as is stock-breeding. In dry years, when domestic animals yield little or no milk at all, there will also be no wild seeds for collecting.

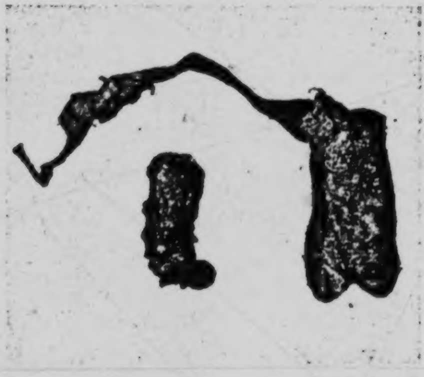

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Fig. 127. Very small bag known as *élem* ("skin") made from a kid's scrotum (*tigassaté*). The bag contains a piece of resin of the *tamat* acacia (*Acacia seyal*). This resin is eaten by the Tuareg as a remedy against stomachache. Ahaggar, the *Afuk-en-teklé* tribe. Dimension of the piece of resin: 0.07 m long. (F.M. 149 a–b).

222 Even in good years it may happen that edible seed-plants are eaten by locusts before they become
[136] ripe for collecting. Collecting is of secondary importance to the Tuareg of Ahaggar though to most
[433] pastoralists it is more important than hunting.

AYR

136 We have seen that Ayr has better grazing grounds and more game than Ahaggar, and it is only
137 natural that this southern area is also a more favourable one for the collecting of wild plants. Never-
222 theless, it seems as if collecting is not so important to the Ayr Tuareg who have more livestock for
[433] which millet and wheat can be obtained without much difficulty. The number of edible plants utilized
in Ayr is probably a very large one. Thus it is said that certain *Kel Ewey* Tuareg collect many different
plants, but my inquiries into the methods and the value of collecting were limited to Tuareg of the
Kel Ferwan drum-group of Southern Ayr where the following species are collected for food: –

222 *afagag* (*Acacia Raddiana*). Pods of this acacia are dried and, after pounding in a large millet mortar,
262 mixed with milk to be eaten or drunk like the Tuareg dish known as *arejira* (cf. p. 245 f.).

252 *ébezgin* (*Salvadora persica*). Fruit is eaten without any preparation.

tadent (*Boscia senegalensis*). Berries are pounded in the millet mortar to obtain the limpid juice which is added to porridge.

[824] *tagayt* (*Hyphaene thebaica*). The dum palm, which is of extreme importance for the handicraft of
the Ayr Tuareg, is also valuable as food. The young nuts are opened with a knife and the kernels are
eaten. The old nuts have an edible outer coating which is eaten by children and even by adults when
they are hungry. These old nuts are also pounded in the millet mortar together with seeds of *ageruf*,
cf. below.

afezu (*Panicum turgidum*). This perennial grass is very abundant all over Ayr. Collecting of its seeds is done by rubbing the ears of the grass between the hands to allow the seeds to fall into a plaited bowl. Seeds are pounded in a millet mortar to be used for porridge.

ichiben, that is seeds of an annual grass – apparently identical with *Panicum longiflorum* and/or *P. spinosa*. The seeds are collected in two different ways: – (1) If the ripe seeds have fallen to the ground they are swept together with a bunch of straw. (2) The ears are cut with a knife to be threshed by pounding in a millet mortar. The seeds are highly esteemed, being collected to a greater extent than seeds of other wild plants. The seeds are used particularly for porridge, but also for certain other dishes such as *arejira* (cf. p. 245 f.).

téjit (*Eragrostis* ssp.). A grass yielding red seeds collected in the following way: – The ears are beaten with the hands so that the seeds fall into a plaited bowl. The seeds are used only for porridge.

wujjeg (*Cenchrus catharticus* & *C. Prieuri*). Annual seed-plants with thorny seeds. The dry plants are beaten with a stick and the fallen seeds are collected in a heap to be threshed with a stick. The seeds are pounded in a millet mortar for porridge.

ageruf (*Tribulus terrester*). An annual plant with thorny seeds which are collected as just described for the *wujjeg* plants. The seeds are pounded in a millet mortar to be eaten without further preparation

a dish known to the Ayr Tuareg as *téderka*. For this purpose the pounded seeds may also be mixed 222
with pounded dum palm nuts. 262

acheror (*Sorghum virgatum*). A tall grass the seeds of which are swept together when fallen to the 252
ground. They are used for porridge.

agazagi. Edible seeds of a grass. They are swept together when they have fallen to the ground, and are used for porridge.

agedagedu. Seeds of an annual plant. When they have fallen to the ground they are swept together by means of a straw bundle. They are pounded in a millet mortar to be eaten as *téderka* without any further preparation.

malokhiya (*Corchorus tridens*). A plant growing in the bush though also grown in gardens. The leaves of this plant are dried and thereupon pounded in a millet mortar to be used as an admixture to porridge-sauce.

abezey (*Cassia tora*). Leaves of this plant are plucked with the hand, or, if the plant is dry, shaken into a plaited bowl. They are pounded and used as an admixture to porridge-sauce.

kat'aket'i (*Cistanche* sp.). It is said to be known as *achellewen* among Tuareg of the *Kel Ewey* group. The edible roots of this plant are dug out with a stick. They are pounded and boiled for a kind of porridge.

acheku (*Glossonema Boveanum*). An annual plant with small lacteal fruit which is eaten as a relish without any preparation.

These are the plant species collected by the *Kel Ferwan* of Southern Ayr. It may happen that some of 222
these plants are destroyed by locusts, but in most years there are excellent possibilities of collecting
wild seeds. Most plants are collected late in summer after the rains (at the season of *garat*), or in [221]
winter (*tigresi*). It is said that in good years more than a thousand kilos of wild seeds can be
collected by the members of a single household, but even this amount of wild seeds does not answer
the need for vegetable products. Collecting is of secondary importance to the *Kel Ferwan* Tuareg. [433]
Very few of the plant species mentioned are collected if there is abundant millet. The main exceptions
are the plants used for sauce-admixture, and the *ichiben* seeds. The latter are collected even by Tuareg
who have enough millet, because porridge made from these seeds is considered a very delicious dish.

The two groups of Northern Tuareg and also the Tuareg of Ayr acquire their vegetable food 433
products mainly from agriculture, which occupation will now briefly be described.

[text continues on p. 183]

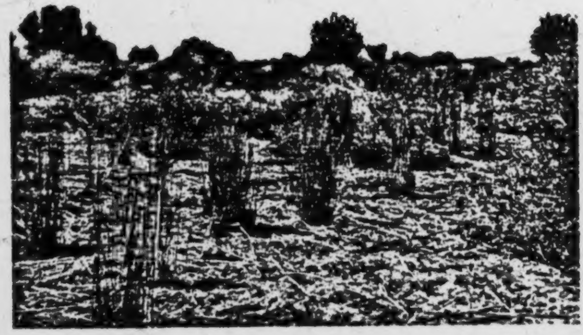

Fig. 128. Harvested wheat-plot grown without artificial irrigation along a river valley. Tasilé-n-Ajjer.

PRIMITIVE CORN GROWING

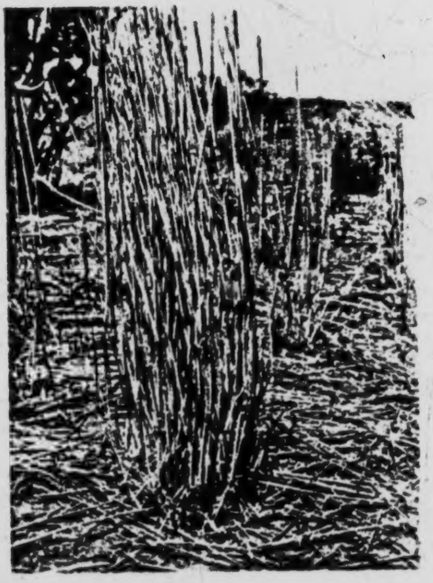

Fig. 129. A close-up of a tuft of harvested wheat from the plot illustrated above (Fig. 128). Tasilé-n-Ajjer.

Agriculture

In the present chapter are described the agricultural techniques as I know them from Ahaggar (Tasilé-n-Ajjer) and from Ayr, and the economic role of agriculture to the subsistence of pastoral Tuareg is discussed. 241

CULTIVATION WITHOUT ARTIFICIAL IRRIGATION

In the Sahara farming is almost exclusively based on artificial irrigation, and agriculture and stock-breeding are largely separated industries. 433 Large-scale stock-breeding necessitates migrations, while irrigation agriculture must be practised by people who live on the same spot almost continuously. But nomadic stock-breeding and shifting cultivation are occupations which go well together at the borderland of steppe and desert in the north where nomads or semi-nomads sow wheat and barley. Lyon says that the bedouins of Tripolitania use a rude plough but more generally a hoe (Lyon 1821, 241 p. 44). However, plough cultivation seems to predominate among the northern nomads nowadays. 171 Shifting plough cultivation is an important subsidiary occupation for most northern nomads in an almost unbroken area between the Atlantic and the Nile or the Red Sea, but it does not penetrate very far into the true desert country. In Algeria I have not seen shifting cultivation practised further south than the oasis of Ghardaya, where nomads under favourable conditions of rainfall sow wheat and barley by means of a simple plough made of a forked piece of wood (Nicolaisen 1950, Fig. 9, p. 70; Capot-Rey & Marçais 1953, pl. II,5 p. 47, Fig. 6 p. 54). West of Ghardaya the plough is known as far south as Tinduf and Beni Abbes, while it is known at Brak of Central Libya towards the east (cf. Capot-Rey & Marçais 1953, map p. 40). Feilberg in one of his early works stated that the plough in Northern Africa is particularly attached to shifting cultivation as a sowing implement (Feilberg 1931, p. 199 ff.). This is in agrement with my own investigations in the Northern Sahara, and it is confirmed by the very remarkable study of Capot-Rey & Marçais, who state that the plough is not fitted irrigation agriculture of the Sahara because of the many fruit trees, notably date palm trees, and because of the whole complicated irrigation system (Capot-Rey & Marçais 1953, p. 51; Feilberg 1931, p. 199). But there seems also to be another reason why the plough is found only in the Northern Sahara: It is particularly fitted for the sowing of wheat and barley, but less suitable for the sowing of millet and sorghum which are the most important cereals grown in the south (cf. Capot-Rey & Marçais 1953, p. 51; Feilberg 1931, p. 201). Barth records that he saw a kind of plough at Awderas in Ayr. It was drawn by three slaves who were driven like oxen by their master (Barth 1857, [567] I, p. 424).

[p. 183]

241 I, p. 424). Rodd thinks the implement seen by Barth was clearly an importation from the north (Rodd
171 1926a, p. 133), and Feilberg assumes that if the plough was once known in this southern area it might
perhaps have disappeared together with shifting cultivation (Feilberg 1931, p. 200). All this may be
so, for there has been much contact between Ayr and the regions of Fezzan and Tripolitania in the
past. But Barth does not say that he saw a plough but "a kind of plough", which may perhaps point
to a type of large hoe drawn by men like that described from Senegambia by Feilberg (cf. Feilberg
1931, p. 169 f.).

243 The plough is unknown in the extensive area inhabited by pastoral Tuareg but this is not so with
a kind of shifting cultivation. Pastoral Tuareg of Tasilé-n-Ajjer sow wheat and barley along the river
valleys when these have been heavily flooded. Sowing is then done in a very simple way:— Holes
are dug into the sandy soil, usually merely with the hand, and a few seeds are put into these holes.
Wheat and barley thus sown grow in tufts with a space of 0.30 to 0.50 metres between each, and there
seem to be about fifty straws in a normal tuft – the largest tuft I have seen contained about 130 straws
(cf. Figs. 128–129). The plots cultivated in this way are generally very small, and the scattered wild
plants growing in the plot are not always removed before sowing. The corn plots are left completely
to themselves until harvesting, which is done with a sickle (Fig. 143). Primitive corn growing of this
type cannot be practised continuously from one year to another in Tasilé-n-Ajjer, and the Tuareg
of that region say that a household never grows enough corn in this way to meet its annual needs.
[178] The primitive method of corn growing without artificial irrigation is unknown in Ahaggar nowadays,
but it seems as if it was known in the past (cf. Duveyrier 1864, p. 372), and the Ahaggar Tuareg have
a particular term (*tawgest*) for a field cultivated without artificial irrigation (cf. Foucauld 1951–52,
III, p. 1466).

Rodd states that rain-grown crops could be raised most years in certain parts of Ayr and that in
earlier days a fair amount of cereals seems to have been produced in this way in Ayr (Rodd 1926a,
p. 133). There is little doubt that this statement is correct, and I think that even in parts of Ahaggar
millet could be raised without irrigation in most years, for millet has a very short period of growth.
[221] In Ahaggar (at Abalessa) it is sown in June-July and is harvested in September. Though millet plots
are irrigated they are never watered much, and never to the same extent as wheat and barley which
are grown in winter. In regard to Ayr, millet in southern villages of the Massif very frequently ripens
in two months, and late in summer, at the end of the rains (*akasa*) or in the early dry season (*rarat*).
[252] I have frequently seen well-developed small plots of millet and sorghum around deserted Tuareg camps
where a great many seeds are always lost on the ground during the pounding and winnowing of millet
for porridge. These self-grown plots, however, are not utilized by the Tuareg as the comparatively
[131] small yield is quickly eaten by the numerous millet-eating birds. Owing to these birds it would be
difficult for pastoral Tuareg to grow cereals in flooded valleys like the Tuareg of Tasilé-n-Ajjer, and
it is partly for this very reason that the sedentary agriculturists of Ayr grow very little millet. Millet
could easily be raised without artificial irrigation during the rains, and, in fact, millet was grown by
shifting cultivation not far from Agadez as recently as up to the French occupation of Ayr.

245 In addition to the species of grain mentioned above there is one very important plant which can
be grown without artificial irrigation, namely the date palm. In Tasilé-n-Ajjer there are river valleys

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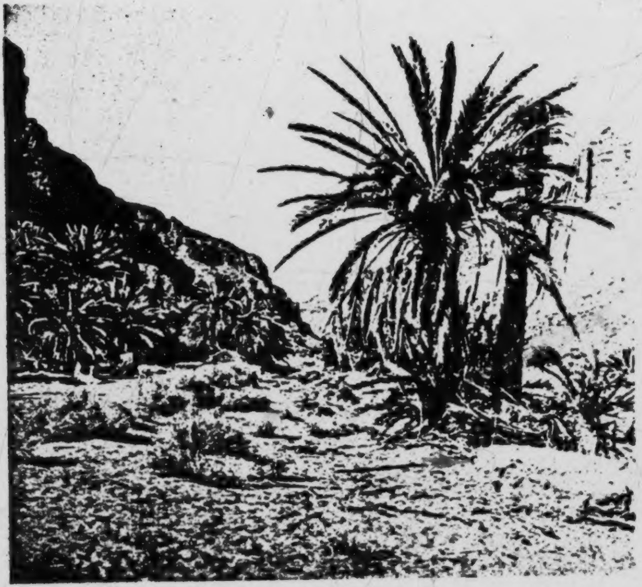

Fig. 130. Semi-wild date palms in the canyon-like Aharhar valley of Tasilé-n-Ajjer. The palms are owned and harvested by pastoral Tuareg.

245 (Aharhar and Éherir) where "semi-wild" palms are abundant. These palms are owned by pastoral
221 Tuareg of various tribes. Their dates are harvested in the autumn when Tuareg palm owners with
342 their slaves live in straw-huts or huts covered with palm leaves situated among the palm trees.

Similar plantations of palm trees which are left to themselves most of the year are also found in
245 Ahaggar, notably at Sil[illegible]-Tibeghin. Part of these palms are owned by members of the *Dag Ṛali* tribe
423 (the sections of *Kel Tamanṛaset* and *Kel Terhenanet*) and by members of the very small tribe, the
651 *Ikechchemaden*. The palm-owners give as an annual payment to the *Amenukal* of Ahaggar one bunch of dates from all palms which have more than two bunches. The yield of another part of the palms
565 belongs to the vassal tribe *Iklan-en-tawsit* (the sections *Kel Silet* and *Kel Tahalṛa*). For usufructs,
651 members of these two sections make a collective annual payments to the *Amenukal* comprising four bags of dates, twenty goats, two ropes of goat's hair, and five water bags. The dates are harvested by
245 Tuareg of the above mentioned tribes in August-September. Harvesting is done with sickles and is
221 finished in three to four weeks when the palm-owners return to their camps with dates packed in bags
492 and loaded on donkeys and camels. In harvesting their dates most Tuareg are assisted by black-
564 skinned agriculturists (*Ḥarratin*, or *Izeggaṛen*) of Abalessa who are given a certain amount of dates
465 for their work. These agriculturists build the huts in which the palm-owners live during harvest (cf.
463 p. 338 f.).

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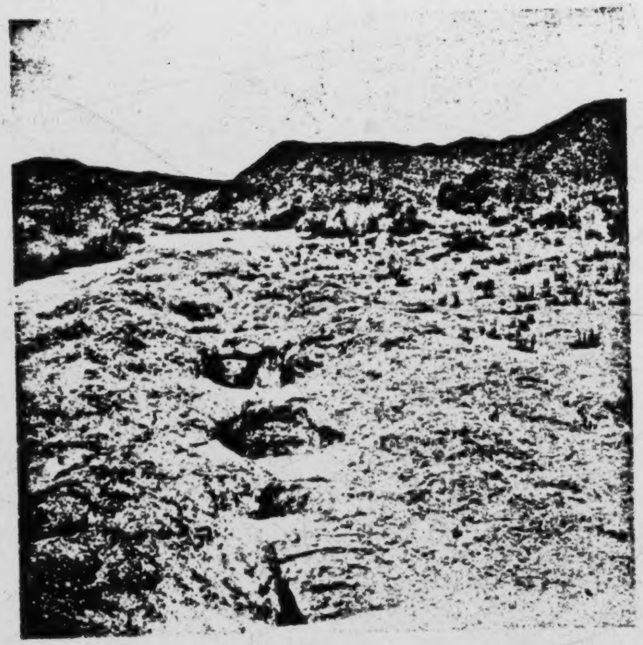

Fig. 131. A *foggara* canal (*éfeli*) dug into the sandy river bed from where it is led into the gardens of the valley terrace. Southern Ahaggar, *Tagnut*.

245 [423] In Ayr there are also a few pastoral Tuareg who own date palms growing in river valleys, e.g., people of the *Imezzureg* tribe of the *Kel Ferwan* drum-group. These date palms, like those growing half wild in Northern Tuareg countries, yield very small dates of a quality inferior to those grown in the oases under constant supervision by agriculturists. Such dates are used only for local consumption.

IRRIGATION AGRICULTURE IN AHAGGAR

241 176 Irrigation agriculture has been practised since ancient times within certain territories now inhabited by the Northern Tuareg. As early as in Roman times there is reference to *Radames*, *Rat*, and certain oases of the Fezzan, which were visited by Roman Expeditions (Lhote 1955a, p. 113 f.; Duveyrier 1864, p. 249 ff., 266 ff., 275 ff., 455 ff.). Lhote thinks that the oasis of Abalessa in the lowland west of the Ahaggar Massif was also visited by the Roman general Cornelius Balbus (Lhote 1955a, p. 88 f., 113 f., 286), but this, perhaps, is to be doubted. In the writings of Medieval Arab authors there is apparently no reference to oases within the Ahaggar country, though oases in neighbouring parts of the Sahara are mentioned.

In literature there seems to be no reliable information about the existence of irrigation agriculture 241
in Ahaggar until Duveyrier, who states that agriculture did not obtain a fixed position in the economic 175
life of the Ahaggar Tuareg until the reign of the *Amenukal Elkhaj Akhmed* (1830–1877) (cf. Duveyrier
1864, p. 369). This statement is confirmed by most agriculturists and pastoral Tuareg in Ahaggar, 241
who claim that prior to *Elkhaj Akhmed* irrigation agriculture was not practised in Ahaggar. During 312
the reign of this *Amenukal* irrigation agriculture by means of the subterranean aqueducts known to 173
the Arabs as *foggara* (*éfeli*, pl. *ifelan*) was introduced by *Ahl Azzi* Arabs and negroid *Ḥarratin* from 177
the Tidikelt oases. Some people of Ahaggar claim that another irrigation system was introduced about
the same time, namely irrigation wells from which water is drawn by oxen and donkeys. This system,
known as *tanut*, is said to have been introduced by agriculturists from Ĝanet (Djanet) (the *Kel Ĝanet*).
It should be noted that there are certain traditions which claim irrigation agriculture to be older in
Ahaggar. One tradition says that it was practised at Silet-Tibeghin by Arabs who immigrated from
Tawat to cultivate by means of the *foggara* system even during the reign of the *Isenan* (Lhote 1955,
p. 286 f.). Another tradition, recorded by Foucauld, states that irrigation farming was known at a 241
very remote date by the *Isebeten* – a pagan people said to be the ancestors of the oldest vassal tribes of 312
Ahaggar (cf. Foucauld 1951–52, II, p. 535 f.). Traditions of the age of irrigation agriculture in Ahaggar 173
are conflicting. If it was practised long before the reign of *Elkhaj Akhmed* by the ancient vassals, I
believe that water was raised by human power, namely by the pole and bucket provided with a counterweight.
For this system, which is known as *aṛudid*, is said to have been very common in the past. It
is extremely rare nowadys, and I have only seen it once at Terhenanet. There can be no doubt that [171]
this simple irrigation method is a very old one in North Africa, where it is more widely distributed
than all other types of irrigation methods (cf. Capot-Rey 1953a, map VII p. 320). The very wide
distribution of this system elsewhere in the Old World points to its great age, and it is perhaps to be
considered the oldest true irrigation machine.

A few Tuareg in the northern groups practise irrigation agriculture, which does not seem to be one 241
of their traditional occupations. Tuareg irrigation farmers are found mainly in the Fezzan, but mention 178
should also be made of the people of three noble tribes, namely the *Ilemtéyen* (living at Ṛat), the
Ikadeyen (at Tit in Ahaggar), and the *Kel-ahem-nellen* (roaming pastoralists north of Ahaggar or settled
farmers at the oasis of Inṛer in Tidikelt). These sedentary or semi-sedentary noble Tuareg were originally
true pastoralists, though but little is known of the original mode of livelihood of the *Ikadeyen*. A few
individuals or families among the Ahaggar vassals have more recently taken up irrigation agriculture
in addition to stock-breeding. There seems to be a growing tendency towards semi-nomadism in
Ahaggar nowadays. There may be several reasons for this. Thus one can point to the decline of [432]
caravan trading and to the fact that pastoral Tuareg cannot so easily get the true agriculturists to cultivate
for them. The true agriculturists of Ahaggar comprise the *Ḥarratin* (*Izeggaṛen*) of Tidikelt, [564]
who have mixed with the manumitted slaves now also known as *Ḥarratin* (*Izeggaṛen*), a few fair-skinned
Ahl Azzi Arabs, and the *Kel Ĝanet* who are predominantly black-skinned. All these agricultural
people tend to mix with each other and also with tribes of pastoral Tuareg.

There are at present about 25 agricultural settlements in the river valleys of Ahaggar. Apart from 361
the administration centre of Tamanṛaset (1600) and the oasis of Abalessa (547) these agricultural 162

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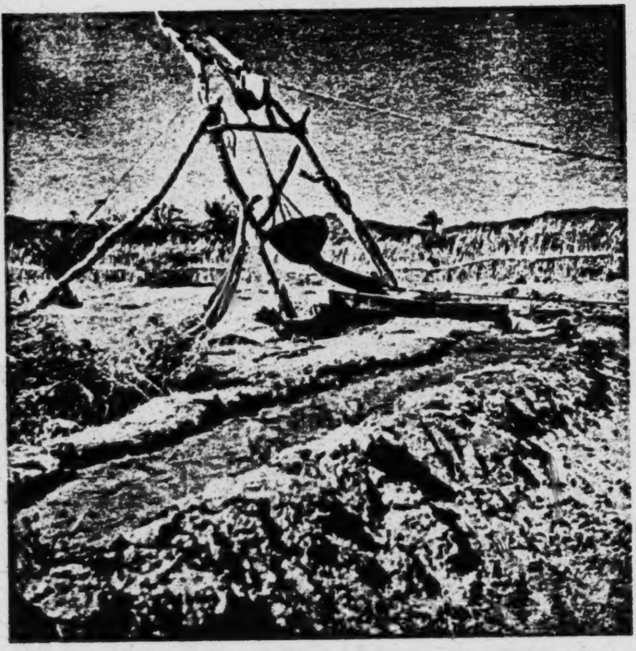

Fig. 132a. The irrigation system known as *sanat*. Ahaggar, Amsel.

361 settlements contain less than 300 individuals, the majority not even a hundred (cf. Lhote 1955a;
[162] p. 292). Most agricultural settlements comprise only a few houses built of stone or mud, or a few
[342] straw-huts (cf. p. 327 ff.). The agriculturists of these small settlements generally keep some goats
[231] and sheep, have donkeys, which are important beasts of burden to all farmers of the Sahara oases, and in certain families there are one or two zebus to raise water from irrigation wells. A few agri-
433 culturists may be characterized as semi-nomads. This is the case of some inhabitants of Abalessa who guard their flocks at some distance from the village. Some of these agriculturists, who were formerly Tuareg slaves, even make skin-tents like pastoral Tuareg.

312 The subterranean aqueducts known to the Arabs of the Sahara as *foggara*, to the Tuareg as *ifelan*
241 (sing. *éfeli*), constitute by far the most important irrigation system used in Ahaggar. However, these *foggara* canals cannot be compared with the large extensive aqueducts of Tidikelt though their intro-
[166] duction to Ahaggar is due to the immigration of agriculturists from that area. The Tidikelt *foggara* are very large aqueducts which are dug into water-bearing strata which can be situated at a considerable distance from the oasis (cf. Capot-Rey 1953a, p. 324 ff., Lô 1953 & 1954; Chaintron 1958). The Ahaggar foggara are generally very short (about one to two kilometres, or shorter), they are not

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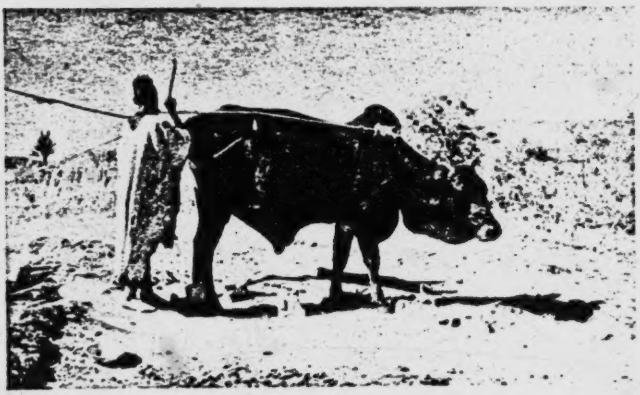

Fig. 132b. Cf. text Fig. 132a.

deep, and are dug into the sandy river bed to lead its water to the gardens of the valley terrace. A map [114] of the foggara aqueducts placed in the river valley of Taṛhawhawt is reproduced by Capot-Rey (Capot-Rey 1953a, Fig. 18 p. 328). There are many advantages attached to the use of foggara systems of the Ahaggar type, for once the aqueducts are dug water automatically flows to the garden. But there are also disadvantages. If a foggara valley is heavily flooded after rains and changed into a roaring stream, the aqueducts are destroyed and the crops also. In general it will be necessary to abandon a foggara system after some years, as it must be cleaned at intervals and in time it becomes too dangerous to work in them as subsidences may occur and kill workers. It may also happen that a river valley is not flooded at all for a period of years when it becomes essential to move to another valley, rich in water under the sandy river bed, to make a new foggara there. For all these reasons deserted foggara systems are common in the river valleys of Ahaggar.

The *foggara* system is unknown south of Ahaggar and has on the whole a rather limited distribution [184] in the Sahara. One reason for this is perhaps that the construction and maintenance of the aqueduct [476] imply the agricultural co-operation of several households. This is not the case with the other common system in Ahaggar, the use of wells (*tunin*, sing. *tanut*) from which water is raised by animal traction. The wells are usually shallow and not very difficult to dig out, and the maintenance of the whole system is usually limited to occasional mendings of the zebu's harness and of the large waterbag. While a foggara canal is always used for the irrigation of several gardens (6–12), the wells are used for single gardens. The irrigation wells are dug into the valley terrace so that they are not destroyed by a flood, and in dry years watering from wells is considered the better system. But in the period when crops need much water irrigation by means of wells is hard work for the garden owner who must drive his ox all day long.

Irrespective of the system resorted to irrigation of a garden is done in the same manner. Water from the *foggara* aqueduct or water raised from well flows into a large basin (*tihemt*) through a canal

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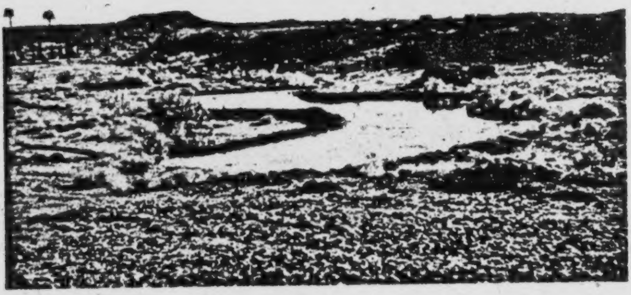

Fig. 133. The large water basin (*tihemt*) from which water is led into the gardens. Ahaggar, Abalessa.

(*teguhamt*, or *tahaft*) from which another canal (*tahaft*, or *teguhamt*) leads water out into the garden, which is always divided into a large number of garden beds (*igemmunen*, sing. *agemmun*) surrounded by low ridges and separated by narrow irrigation canals. The large water basin serves to regulate watering, which outside of the very cold season is done during the night. A flat stone with a hole in its middle and known as *anefif* is placed between the basin and the canal leading water into the garden; water for irrigating the garden flows through this hole when irrigation is needed at night, while the hole is closed by means of a cotton stopper during the day. The basin is thus filled with water during the day and its water runs into the garden at night (cf. Figs. 131–136).

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[221] The irrigation systems described are most important for the cultivation of the winter crops of wheat and barley. The Tuareg word in Ahaggar for wheat is *éred* which is a collective name for several types of wheat known as *elkhamra*, *elmansuri*, *amekkawi*, *ṭati*, and *menga*. These special names seem to be derived from Arabic (cf. Foucauld 1951–52, III, p. 1058, 1211 & IV, p. 1789; Maire 1933, I, p. 246). According to Maire these types of wheat belong to the species *Triticum aestivum*. I have never myself seen fully-grown wheat in Ahaggar and was thus unable to collect ears for identification by botanists, but seeds brought home from Ahaggar and Tasilé-n-Ajjer have been identified by Dr. Hans Helbaek as belonging to common bread wheat. Barley is known to the Tuareg as *timẓin*. Threshed seeds brought home from Ahaggar have been identified by Dr. Helbaek as belonging to the six-rowed type (*Hordeum vulgare*, though some, he thinks are perhaps of the two-rowed type (*H. distichum*). Barley, like wheat, is a winter crop though less common. At Abalessa I was told that two thirds of the seed-crops grown in winter were wheat, while only one third was barley.

[221] Wheat and barley are grown in the same way. Sowing is done in the autumn (*tober*), and the seeds are put into the garden beds with the fingers. Harvesting takes place in the month of April (*ibri*) and is performed with a sickle (Fig. 143). The growing of wheat and barley is a very strenuous task for irrigation agriculturists. Watering is done for the first time immediately after sowing. When I stayed at Abalessa, in the month of January 1955, the tender plants of wheat and barley were watered two days in succession, and the 10–12 gardens belonging to the same *foggara* were irrigated in succession in this way. At that time of the year the plots are not generally watered at night because of the cold [132]
temperatures which may be below zero.

temperatures which may be below zero. At a later date the plants of wheat and barley are watered 243 less frequently, and watering ceases completely some time before harvesting in order that the plant may ripen more easily.

The agriculturists of Ahaggar do not manure the garden plots used for wheat and barley. Only a new garden plot never previously cultivated is manured, and when such a garden is made the wild vegetation of grasses, herbs, bushes, and trees is often set on fire. Wheat and barley can be grown in the same garden plot for three or four years in succession, and the soil then needs at least one year's rest. In this way, the same garden plot can be kept under cultivation for many years without manuring: this continuous cultivation on the same spot with a one year's rest for each three or four years cultivation is possible partly because there is a certain crop rotation with other plants grown in summer, but mainly because the agriculturists during the period wheat and barley are grown carry fresh soil to their gardens. This is done not only before sowing but also throughout a long period of the winter when the plants are tender and green. When I stayed in the settlements of Abalessa and Amsel in the [101] months of January and February (1955), all agricultural households worked strenuously from morning to night carrying soil to the green garden plots of wheat and barley. The soil was carried in plaited baskets [482] (cf. Fig. 135) on the head, or in bigger baskets carried by donkeys. The soil was left in small heaps [492] (one in every garden bed) to be spread over and between the green plants (cf. Fig. 137). This extremely [461] strenuous work, I was told, would continue until the month of March.

In spite of the fact that cultivation in Ahaggar is done intensively and much work is connected with it, the yield of winter crops is not a very considerable one. In Abalessa it is said that seed-corn of wheat and barley will normally amount to about 50 kgs, and about 500 kgs is to be considered a normal yield, though certain gardens which are extremely well cultivated may yield more and in rare cases up to one thousand kilogrammes. The gardens I saw at Amsel and Taṛhawhawt were smaller than those seen in Abalessa. At Taṛhawhawt the quantity of wheat and barley sown, was said to amount to about 35 kilogrammes.

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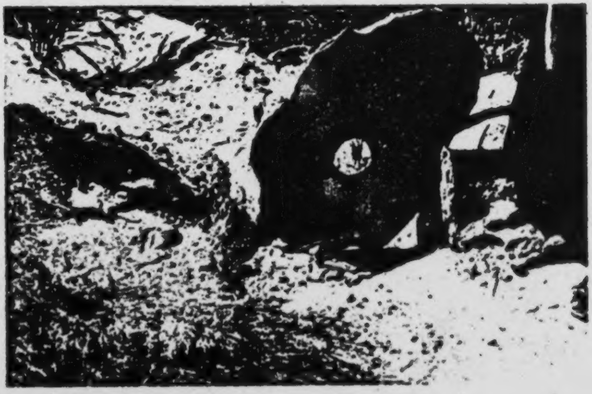

Fig. 134. The flat stone (*amefli*) inserted between the water basin (*tihemt*) and the canal (*tefuhamt*) which leads water towards the gardens. Irrigation stops and the basin runs full of water when a cotton stopper is put into the round hole in the middle of the flat stone. Ahaggar, *Ahl Azzi* Arabs.

243 Wheat and barley grown in winter constitute the most important crops in Ahaggar, but, as mentioned, [262] the gardens are also cultivated at other seasons, and crops of millet and sorghum taken in summer are most important substistence for irrigation farmers in Ahaggar. Millet is known to the Tuareg as [171] *énélé*; it seems to be the same species as that so widely grown by African agriculturists of the savannah countries (*Pennisetum typhoideum*, or *P. Americanum*). Millet is sown in June-July and harvested in Sep- [221] tember, or in October. Little work is involved with the cultivation of this plant which is never watered [461] much (cf. p. 184), and the agriculturists do not carry fresh soil to the millet plots as they do to plots of wheat and barley. Species of sorghum are less important than millet. The common species is known as *abora* or *tafsut* (*Andropogon Sorghum*). Another species is known as *tallak*; it has smaller seeds than [386] the species just mentioned, and is grown mainly because of its stems, which are reduced to powder to be used for dyeing skins red (cf. p. 282).

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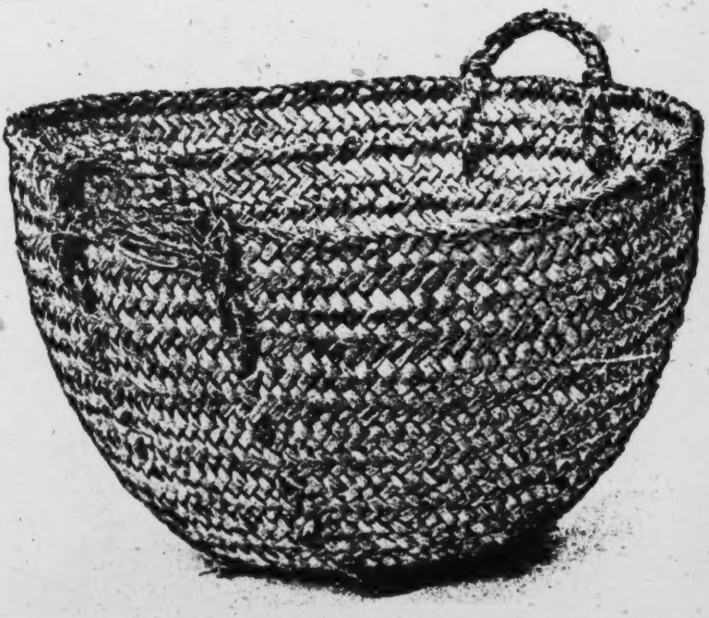

Fig 135. Basket (*tésenit*) of the type used for transportation of fresh soil to old garden land. It is plaited from straps of date palm leaves (*aġum*) and has handles of rope made from date palm bast (*asan*). Soil is also carried to gardens in larger baskets (*téyerirt*, pl. *tiyrar*) loaded on donkeys. Ahaggar, Abalessa. Dimension: 0.22 m high, 0.35 m in diameter at the rim. (N.M. G. 5285).

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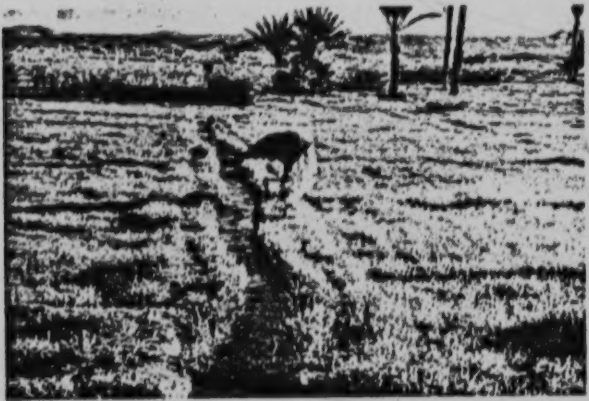

Fig. 136. Irrigation of a young wheat-plot. The canal ridges are opened with a hoe in order to let water penetrate into the garden beds. Ahaggar, Abalessa.

to be used for dyeing skins red (cf. p. 282). Maize (*Zea mays*) is also grown as a summer crop in some of the cultivation centres; it is called *engafulé*, or *engafulé masri* (masri = Egyptian) because it is said to have been introduced from Egypt.

Tomatoes (*tomatem*; *Solanum lycopersicum*) are grown mainly in summer and constitute a very 241
important crop. The ripe fruit is sliced and left to dry on a layer of straw in the garden. They are 252
crushed and pounded and are added to various dishes, e.g., the so-called kuskus (*keskesu*, cf. p. 247). Various types of melons and gourds are also grown in summer, e.g., the water melon (*taleġeẓt*; *Colocynthis Citrullus*), a type of ordinary melon known as *tétakelt* or *tazenut* (*Cucurbita* sp.) which is frequently sliced and dried in the same way as tomatoes, and a kind of large gourd (*kabuya*; *Cucurbita maxima*). Certain other vegetables are grown in most gardens, notably various kinds of onions (*téskert*, *Allium sativum*; *éfeleli*, *Allium cepa*) and a kind of beans known as *tadellaḳ*. A few plants 263
are grown as spices, e.g., saffron (*taneṛmit*, *Crocus sativus*), red pebber (*chiṭṭa*, *Capsicum anuum*), or for tea-admixture, e.g., the mint (*émeṛner*, *Mentha piperita* var.) and a plant known as *lahabok* which is said to have been introduced from the Sudan. Two very poisonous plants are also grown in certain 824
gardens of Ahaggar, namely *éfelehleh* (*Hyoscyamus muticus* ssp. *falezlez*), which also grows wild in the lower country (cf. p. 178), and *burzig* (*Datura Stramonium*) (cf. Maire 1933, I, p. 191 f.). Foucauld mentions two other plants grown for their medicinal value (*ibeḍliwen*, *Trigonella foenumgraecum*; *tikamnin*) (Foucauld 1951–52, I, p. 33 & II, p. 812). A kind of wild salad (*tamaghé*) is also grown in the gardens according to Foucauld (Foucauld 1951–52, III, p. 1170). Potatoes (*Solanum tuberosum*) 439
are now grown in some of the mountain oases – mainly for selling to Europeans at Tamanṛaset. Among other cultivated plants found in the gardens of Ahaggar mention can be made of the following species after Maire:—

Lepidium salicum, *Brassica Rapa* & *B. oleracea* (*aharet*), *Linum usitatissimum* (*ilatelé*, or *anarka*), *Medicago sativa*, *Pisum arvense* (*demchi*), *Vicia Faba*, *Lens culinaris* (*elṛedes*), *Vigna catjang*, *Cori-*

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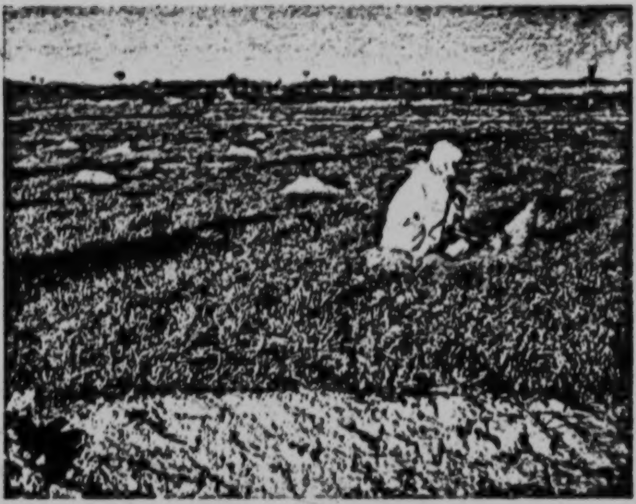

Fig. 137. The fresh soil carried to old gardens is placed in small heaps to be spread out between the tender plants of wheat and barley. Ahaggar, Abalessa.

241 *andrum sativum*, *Cuminum Cyminum* (*azkar*), *Daucus Carota* (*ezzeruget*), *Cucumis melo*, *Lagenaria vulgaris* (cf. Maire 1933, and particularly Maire 1940, p. 401).

245 [262] In addition to the above-mentioned plants there are various types of fruit trees which do not play any considerable rôle for food. The gardens contain very few date palm trees (*tazzayt*, *Phoenix dactylifera*) and there are no palm trees of any value in the gardens situated in the upper mountain zones where the fig tree (*tahart*, *Ficus carica*) thrives much better than in the lower country; the figs are [251] consumed fresh, or they are put on strings for drying, common practise elsewhere in North Africa. The [386] pomegranate (*terrummant*, *Punica Granatum*) is grown in some gardens; its fruits are eaten, and they are also used for dyeing skins (cf. p. 282). Grapes (*tezzebibt*, *Vitis vinifera*) are also grown in some gardens.

Maire mentions the cultivation of the peach (*Prunus Persica*) and the apricot (*Prunus Armeniaca*) (cf. Maire 1940, p. 401). These fruit trees have undoubtedly been quite recently introduced for Foucauld states that they are not grown in Ahaggar (cf. Foucauld 1951–52, I, p. 79 f.).

243 423 There are nowadays many agriculturists who have their private gardens so that they cultivate their winter crops and their summer crops entirely for their own use. But most agriculturists grow winter crops of wheat and barley on behalf of the Tuareg who are then the true garden owners.

[312] [476] Agriculturists who cultivate their gardens on their own behalf frequently irrigate crops by means of draught animals (zebus) which raise water from wells, but there are also some farmers who cultivate independently without any contract with pastoral Tuareg and nevertheless belong to a *foggara* team. 243 It can be estimated that an independently working agriculturist obtains a total yield of about 700 kilos of wheat and barley grown in winter. Of this yield he gives 10 kilos to the *Amenukal*, or to the

Of this yield he gives 10 kilos to the Amenukal, or to the 243
Tuareg who has territorial rights (cf. p. 151), while the yield of one garden bed – that is about other 151
ten kilos – is given to a blacksmith who in return mends hoes and other agricultural implements. The 362
necessary amount of seed-corn, comprising about 50 kilos, should also be withdrawn from the winter
crop yield so that his total net profit is about 630 kilos of wheat and barley. To this amount of cereals 241
can be added the yield of summer crops (millet, sorghum, maize, tomatoes, and other vegetables) for

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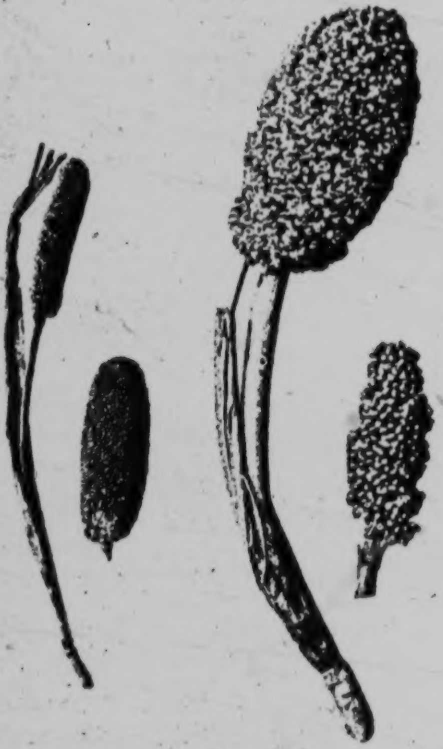

Fig. 138a–c. Grown cereals from Ahaggar.
a. Millet (*énéli*) (*Pennisetum typhoideum*). b. Two types of sorghum (*abora, tafsut*).
c. Maize (*engafulé*) (*Zea mays*).

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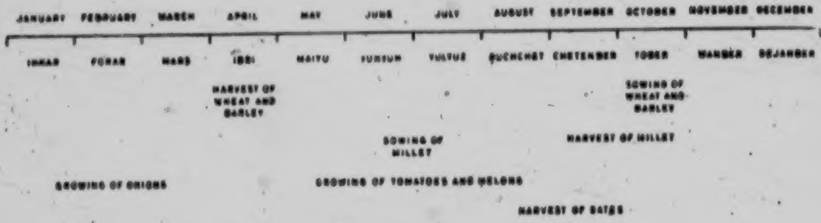

Fig. 139. Horticultural calendar from Ahaggar.

The Tuareg and the negroid agriculturists have a lunar calendar of twelve months corresponding to the Arab calendar, but a lunar calendar has no practical value for the indication of seasonal agricultural activities. The Julian Calendar is known to some people of Ahaggar as well as to other Berbers of the Sahara and the Atlas. Tuareg names of Julian months are given above. Very few people in Ahaggar know the exact beginning and the end of the twelve Julian months, but a few names are used as seasonal terms: *innar* = "midwinter", *mars* = "beginning of spring", *ibri* = "early harvest" (of wheat and barley), *maiyu* = "beginning of summer", *tober* = "late harvest" (millet).

241 which no definite figures can be given, while the yield of fruit trees growing in the garden plot does
[423] not necessarily belong to the agriculturist. These trees frequently belong to pastoral Tuareg.

433 I think it can be estimated that an agricultural household with its own garden produce about a
262 thousand kilos of vegetables food products annually for its private use. We can add that though the members of an agricultural household live mainly on vegetable food products they also acquire a certain amount of food from livestock, which normally comprises a few goats and sheep, and perhaps one or two zebus. Conditions of stock-breeding are not always favourable to people who live continuously on the same spot, but it is advantageous to the agriculturists of Ahaggar, who live close to valleys with some pasture, that they are able to feed their animals on green garden products when pasture is badly developed and thus avoid the disaster of a drought. It is also an advantage to most agriculturists that they do not have to water their animals which can drink freely from the irrigation canals. The agriculturists can kill a few goats or sheep annually; they obtain milk and a little butter
[234] to be used mainly as a sauce for bread and porridge, and they make cheese of the *awles* type (cf. p. 229), but they never make cheese from fresh milk as do many pastoral Tuareg when milk is abundant. The agriculturists also breed fowls and pigeons, and some of them have an important meat supply from hunting with steel-traps (hares, jackals, fennecs, and ravens). Collecting, on the other hand, is of little or no value to irrigation farmers of Ahaggar.

241 The economic position of agriculturists who work without any particular obligations towards
466 pastoral Tuareg is tolerably good. It is less favourable to those who grow winter crops also on behalf
[423] of the Tuareg, as do most cultivators. Some of them irrigate the garden plot with water raised from
[511] wells by oxen which may belong to the cultivator or to the Tuareg. But most agriculturists who work
241 for the pastoral Tuareg irrigate by means of *foggara*. It is very strenuous work to dig a *foggara* canal,
312 and co-operation is needed not only for this but also for the maintenance of the whole irrigation system.
466 The gardens are individually tended by the agriculturists, who co-operate in the *foggara* work under
476 the leadership of a headman known as *amrar n efeli*, that is "chief of the *foggara*". This headman is

241 appointed by the Tuareg garden owners and is rewarded by a garden of his own for his responsibility
312 in supervising all co-operative work. The unit of agriculturists co-operating at the same *foggara* may
461 or may not correspond to an extended family. The agriculturists co-operating on any large *foggara*
471 irrigating ten or twelve gardens frequently represent two or three distinct families which are not linked
to each other by kinship bonds. The cultivators of a *foggara* comprising nine gardens at Taɣhawhawt
[675] belong to three distinct, unrelated families. This is quite natural in view of the fact that contracts
between the Tuareg and the cultivators are made individually.

423 There may also be no kinship bonds between the pastoral Tuareg who have gardens at the same
foggara, and there are even Tuareg who own two or three gardens situated in widely separated river
[614] valleys of Ahaggar. But Tuareg garden owners of the same foggara frequently belong to the same tribe
or even to the same tribal section. When a garden-owning Tuareg dies, his garden will generally pass to
[428] somebody within his family, but there seems to be no fixed rules governing the transference of gardens.

461 The individual contract between a Tuareg garden owner and his cultivator is made for a period of
675 six months – the period of growth for wheat and barley. The agriculturist is responsible for all garden
423 work, and the Tuareg garden owner has the following obligations:—

241 (1) To supply his cultivator with a hoe every year, or every two years in case a very good hoe is given.

(2) To pay for repairs of the *foggara* system, or for the digging of a new *foggara*. This payment is known as *almarsor* and consists of two kilos of cereals or dates every working day until water reaches the garden.

(3) To pay for the making of garden beds. This payment is known as *éhéré n egalab*, and is made only once as long as the garden remains on the same spot. When a garden is moved after a period of three or four years the payment must be made again. It varies with the size of the garden and the quality of its soil; in general it consists of 15–25 kilos of cereals.

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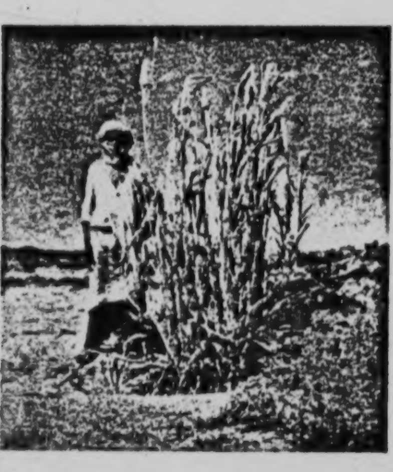

Fig. 140. Millet (*énélé*) of very high growth. It is said that this particular millet type was introduced to Ahaggar from the south – possibly from Ayr. Ahaggar, *Ahl Azzi* Arabs.

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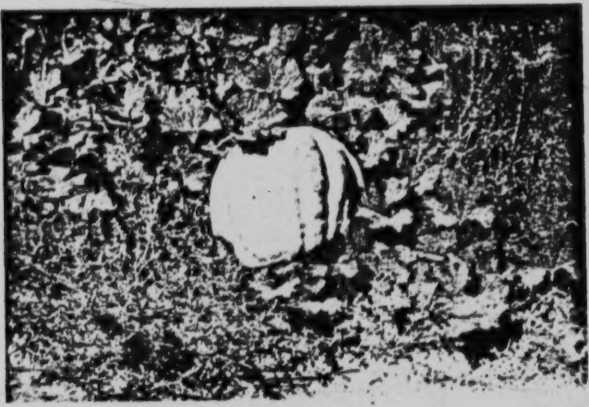

Fig. 141. The large gourd known as *kabuya* (*Cucurbita maxima*) growing close to the thorny fence (*afarag*) which term is also generally used to designate a garden. Ahaggar, *Ahl Azzi* Arabs.

466 Tuareg garden owners have other obligations besides those listed under these three items, but these
625 obligations vary with the systems of contract of which there are three. One system is known as *khamast*
423 according to which the agriculturists gets only one fifth of the crops. This system is widely found in
241 North Africa but has disappeared in Ahaggar some years ago. It is said that it was abolished by the
[171] *Amenukal* because it very frequently gave rise to disputes between Tuareg garden owners and their
[578] cultivators. It is now replaced by two other systems, the *tilt* system allowing one third of the crops to
the cultivator, and the *aṛil* system according to which crops are divided equally between the owner
and the cultivator. This last system is that almost exclusively used in Ahaggar nowadays.

To revert to Tuareg obligations towards their cultivators, these obligations, in addition to those mentioned above, are as follows:—

(4) To hand over an amount of seed-corn (*téfest*) of wheat and barley according to the size of the garden plot and the system of contract. With a *khamast* agreement the Tuareg garden owner gives all seed-corn. With a *tilt* agreement half of the seed-corn is supplied by the owner, the other half by the cultivator who is then also allowed to cultivate a private garden. With an *aṛil* agreement half of the seed-corn is given by the garden owner, the other half by the cultivator who does not possess a private garden unless he is headman of a *foggara* (p. 196).

(5) To give an amount of food to the agriculturist during the cultivation period of six months. This payment is known as *tenafok*, and is fixed at 75 kilos of millet, barley, or dates when cultivation is done according to the *aṛil* system, while 150 kilos are given for cultivation according to agreements of the two systems *tilt* and *khamast*.

[434] The net profit to an agriculturist who cultivates for a Tuareg garden owner is lower than that gained by an agriculturist cultivating exclusively for his own private use. This will be seen more clearly from the calculations below where a garden with an annual yield of 700 kilos wheat and barley is considered:—

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	Cultivator		*Tuareg Garden Owner*	
The khamast system	Receipts	Expenditure	Receipts	Expenditure
The *khamast* division	140 kg		560 kg	
Land rent		5 kg		5 kg
Yield of one garden bed to blacksmith		5 kg		5 kg
Seed-corn				50 kg
Food given to the cultivator	150 kg			150 kg
	290 kg	10 kg	560 kg	210 kg
Net profit	280 kg		350 kg	
The tilt system				
The tilt division	233 kg		466 kg	
Land rent		5 kg		5 kg
Yield of one garden bed to blacksmith		5 kg		5 kg
Seed-corn		25 kg		25 kg
Food given to the cultivator	150 kg			150 kg
	383 kg	35 kg	466 kg	185 kg
Net profit	348 kg		281 kg	
The aṛil system				
The *aṛil* division	350 kg		350 kg	
Land rent		5 kg		5 kg
Yield of one garden bed to blacksmith		5 kg		5 kg
Seed-corn		25 kg		25 kg
Food given to the cultivator	75 kg			75 kg
	425 kg	35 kg	350 kg	110 kg
Net profit	390 kg		240 kg	

A few notes should be added to these calculations of receipts and expenditure in the three systems. Thus the profit of the cultivator in all three systems is somewhat bigger than is indicated. The hoe is given by the Tuareg garden owner, who must also make certain payments for irrigation work and for the making of new garden beds as mentioned above. The garden owner's net profit in kilogrammes is consequently somewhat lower than indicated, but it should be mentioned that payments made by a Tuareg garden owner are hardly ever made in wheat and barley, but mainly in millet and dates which are less valuable, particularly so because the pastoral Tuareg acquire millet and dates at very low prices during their caravan expeditions (cf. p. 209 ff.). Therefore, the profit made by a Tuareg garden owner cannot so easily be given in kilogrammes of agricultural food products. It is evident that all three systems are profitable to the Tuareg, and it is clear that an agriculturist who cultivates a garden entirely on his own behalf is better off than an agriculturist who works for the Tuareg. It is also evident that to the agriculturist the *khamast* system is less profitable than the *tilt* system, which again is less profitable than the *aṛil* system. With the abolishment of the *khamast* system the agriculturists now

[435]

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475 obtain a larger amount of vegetable food products and more wheat and barley. The pastoral Tuareg
423 gain less from their gardens than they did when the *khamast* system prevailed, but it is still profitable
241 for them to be garden owners.

434 The quantity of agricultural products anually consumed per person among the *Kel Ahaggar* is
511 estimated by Lhote at 187 kilos millet, 15 kilos dates, and a small amount of wheat for which no
262 figure is given. For Arabs of the Sahara the quantity of vegetable food is estimated at 180 kilos wheat,
[171] and 75 kilos dates anually per person (Lhote 1955a, p. 263). I add to this that wheat is used for bread
to a very large extent by the Ahaggar Tuareg, who also make much use of barley for bread and porridge.
According to Malaurie the amount of agricultural food products available per person among the
Ahaggar Tuareg is about 400 grammes a day, or 146 kilos anually (Malaurie 1953, p. 342). It should
be noted again that the amount of agricultural food products necessary for a Tuareg household varies
greatly from one year to the other. In years of drought when agricultural products form so to speak
the only source of food for the nomads, they estimate that a household consisting of husband, wife,
and one child will consume about two kilos of cereals (dates) every day, or 730 kilos in a year.
Consequently the amount of cereals and dates consumed anually per person may in dry years rise to
[171] about 245 kilos. This seems to correspond to the amount of food considered necessary for Arabs of
Tidikelt and Tawat, who live almost exclusively on cereals and dates. When employed as labourers by
the French Administration these sedentary Arabs are given 16 kilos of wheat and 4 kilos of rice a month,
or 240 kilos of agricultural products anually per person (Information obtained from the administration
511 office of In Salah in 1954). The agricultural products obtained by a pastoral household from a single
433 garden will not meet the needs of the household and its slaves even in years of good grazing, and less
so in dry years when pastoralists subsist entirely on agricultural food products. I give an example:
During the year 1954-55 which was extremely dry, a Tuareg who owned three gardens cultivated with
an *aril* agreement could not feed his household and his slaves (comprising two men, two women, and
three children from five to twelve years old) by means of his own garden products. The Ahaggar
[437] Tuareg depend on caravan trading for their provisions of agricultural food, and trading also helps them
to create the capital of millet and dates which is invested in their gardens in Ahaggar grown on their
behalf by agriculturists. I believe that most pastoral households of Ahaggar have gardens, but there
are Tuareg who have none. This is true, for instance, of most Tuareg living in and around the Ahnet
Massif. Tuareg of this region formerly had gardens irrigated by the *foggara* system at Abalessa, but
to-day they acquire their vegetable food products mainly by caravan trading.

IRRIGATION AGRICULTURE IN AYR

563 The largest aggregation of sedentary people in Ayr is found in Agadez (4.737), which is inhabited almost
[361] exclusively by negroid peoples who speak Hausa though most of them also know the Tuareg
[162] language (*tamachek*). This large sedentary population mainly lives on trade and on crafts of
[197] various kinds. The inhabitants are known to the Tuareg as the *Imeggedezen*. They are said to be related
[433] to the Sultan (or the *Amenukal*) of Agadez. There is a tradition which claims that the Sultan came
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Fig. 142. Tomatoes (*tomatem*; *Solanum lycopersicum* and a type of melon (*tazenut*; *Cucurbita* sp.) cut into slices and left upon a layer of straw for drying. A basket (*tésenit*) filled with ears of millet (*énélé*) is seen in the front. Ahaggar, *Ahl Azzi* Arabs.

563 from Constantinople, and the true *Imeggedezen*, it is said, came from the same region. They were
173 kinsmen of the Sultan who came to see their relative Sultan as guests or visitors and therefore acquired
[361] the name "*Imeggedezen*". They founded the city of Agadez, though it is said that sedentary people of the *Itésen* group of Tuareg were already living at this place. The city of Agadez seems to have been founded in the 15th century shortly after the foundation of the Sultanry which was established 1405
361 A.D. (cf. p. 414 f.). I shall return to the problems connected with the establishment of Agadez in a
621 later chapter, and shall here content myself by saying that Agadez was established as a trading post, which also became the seat of government of Ayr, and the town never seems to have been a true agri-
[312] cultural settlement. There are no gardens, and even drinking water is very scarce and fetched by the women from outside of the city at wells and in river beds. The *Imeggedezen* are mainly city dwellers
[563] though there is a small population of agricultural *Imeggedezen* that possesses gardens at Alarses, a few kilometres north-east of Agadez.

197 In Barth's days the main language of the sedentary Agadez population was *Sonɣay* (Barth 1857,
563 I, p. 504). This is still spoken by a few people within the city, and it constitutes the traditional language
361 of the people inhabiting the oasis of Ingal (1.430) west of Agadez. These Sonɣay-speaking people of
162 Ingal, known to the Tuareg as *Isawaɣen*, subsist mainly upon their palms which yield dates of an
563 433 excellent quality, and they do not otherwise engage much in agricultural activity. In the winter season
245 some of these people settle in Tegidda-n-tésemt towards the north to work in the salt pits. Trade and
221 crafts are also important industries to the sedentary people of Ingal, which owns a market.

463 Throughout the Ayr Massif there are many agricultural villages in which the farmers live in straw-
361 huts, and in houses built of stone and mud (cf. p. 327 ff., Figs. 246 ff.). Most people of these villages
342 162 belong to the group of *Kel Ewey* Tuareg, but there are also some agriculturists who belong to other Tuareg
162 groups, e.g., the *Itésen* (cf. p. 330, 412, 414, 417 f.). The *Kel Ewey* Tuareg originally came from the north
144 as true fair-skinned Tuareg, but in Ayr they mixed with an ancient negroid and Hausa-speaking popula-tion that subsisted on agriculture
433
[174]

162 tion that subsisted on agriculture. Most members of the *Kel Ewey* group are fairly negroid in appear-
144 ance, and though some of them lead a nomadic life and subsist mainly on stock-breeding, the bulk of
433 the *Kel Ewey* are sedentary agriculturists who have some livestock comprising goats, sheep, zebus,
and sometimes camels also. Among the fair-skinned Tuareg of the *Kel Ferwan* drum-group there are
very few sedentary agriculturists, though a few vassals have taken up irrigation agriculture in recent
times. There are also agriculturists within the negroid group of the *Kel Ferwan* known as *Irawélen*.
[567] Some *Kel Ferwan* Tuareg have gardens cultivated by their slaves, but this is not customary nowadays
when slavery is of little importance in Ayr. Contracts between pastoral Tuareg and cultivators
241 are said to have been unknown until recent times when a few pastoralists have made contracts with
466 cultivators. There seem to be no fixed systems regulating such relationships, but it is said to be common
for the cultivator and the Tuareg to divide crops equally between them.

241 Though agriculture could be practised in Ayr without artificial irrigation there are no rain-grown
312 crops within the Massif nowadays. The *foggara* system is unknown, and irrigation is done by raising
water from shallow wells. The system of a pole and bucket provided with a counterweight known in
Ayr as *aseftan* has disappeared quite recently. It was used at many agricultural settlements of Ayr
until a few years ago, and in parts of the country formed the only type of irrigation system at the time
of the French occupation. One informant told me that in his boyhood about 35 years ago no other
irrigation method was employed at Alarses, and this is in agreement with literature (cf. Capot-Rey
1953a, p. 322). At that time, however, the method of raising water from wells by animal traction
(in Ayr *anu*, in Ahaggar *tanut*) was also practised at many settlements. It is unknown when it came
to Ayr, but it is said to have been introduced from the north – probably from the regions of Fezzan
[492] and Tasilé-n-Ajjer from where the same system came to Ahaggar (cf. p. 187). It is now used at all
settlements as the only type of irrigation system, and zebu-oxen are always used for traction. This
was not so in the past when zebus were less common than to-day, and it is said that donkeys were
then the common draught-animals. The irrigation of gardens is performed in much the same way as
in Ahaggar. The water raised from the shallow well (*anu*) is led through a narrow canal (*aṛelal*) to a
large basin (*tisemt*) from where another canal (*duki*) leads to the garden (*afarag*), which is divided
into a number of beds (*éfenṛal*).

243 Cereals form the most important crops in Ayr. The common winter crop is wheat (*elkama*; *Triticum
vulgare*), but also barley (*Hordeum tetrastichum* var. *pallidum*) is very widely grown. One crop of these
two cereals is taken every winter, and it is said that the period of growth is about five months; sowing
is done in October, harvest in March. Cereals are also important for summer crops. Both millet (*énélé*;
Pennisetum typhoideum) and sorghum (*abora*; *Sorghum caudatum*) are grown, and millet, as we have
[262] seen, has a very short period of growth – only about two months (cf. p. 184). But though millet is
most important as food for agriculturists and pastoral Tuareg alike, it is not widely grown because
it is difficult to protect it from the numerous small birds and because, it is said, millet grown in Ayr
[439] is of a quality inferior to that of the Sudanese type. Most of the millet eaten in Ayr is therefore imported
from Damergu by pastoral Tuareg. By far the most important summer crop grown in Ayr is maize
(*Zea mays*), which is known to the Tuareg as *abora maser*, that is "Egyptian sorghum" (*abora* =
[286] sorghum; *maser* = Egypt) (the name *maser* is also used to designate the white cotton used for garments

by many Tuareg, who say that they have not always known this white cotton, though indigo cotton 243
has been introduced from the Sudan since very remote times). Maize has a normal period of growth 286
of about three months, and two – in certain places perhaps even three – yields are taken in the hot seasons.

In addition to the above-mentioned cereals there are various kinds of vegetables grown in the Ayr 241
gardens. Tomatoes (*tomatem*; *Solanum lycopersicum*) are grown at most seasons with the exception of the dry and very hot summer period (*éwilen*). Also common in the Ayr gardens is the sweet potato (*dankale*; *Ipomoea Batatas*), which is sown at the beginning of the rains and harvested in winter. The
true potato (*batata*; *Solanum tuberosum*) has been introduced more recently, and is grown mainly to [439]
be sold to European households in Agadez. It is grown in Eastern Ayr (Tabello). Melons (*Cucumis melo*) and water melons (*Colocynthis citrullus*) are grown all over Ayr and there are different vegetables
such as onions (*Allium cepa* & *A. sativum*), which are harvested at most seasons. Two plants are grown 241
mainly because they are important as admixtures to porridge sauce. One is called *ékabewwa* (*Corchorus* 252
olitorius); it has maize-like seeds which are pounded in a mortar for sauce-making. The other plant is known as *malokhiya* (*Corchorus tridens*); its leaves are dried and pounded for sauce (cf. p. 243). The latter plant also grows wild outside the gardens. There are in Ayr also certain spice-plants, e.g., *Capsicum annuum* & *C. frutescens*. To all these cultivated plants can be added certain fruit trees, such as 245
the date palm (*talesdar*; *Phoenix dactylifera*), the fig tree (*tahart*; *Ficus carica*) grown in the mountains, and the lemon tree (*lemon*; *Citrus aurantifolia*) which is grown in Southern Ayr; it yields very small fruit which remains green even when ripe. It should finally be mentioned that the cotton plant (*ebduga*; 248
Gossypium hirsutum) is also grown in some gardens of Southern Ayr. According to Miré and Gillet it was introduced into Ayr by the Hausa, but the plant has also been introduced further north in the Sahara in Tawat (Miré & Gillet 1956, p. 244). As stated by Rodd, the cotton plant is rare in Ayr and has perhaps been recently introduced into this region (Rodd 1926a, p. 132). There are many other 241
cultivated plants in Ayr, but the above mentioned constitute the most important species.

In Ayr, as in the north, irrigated cereals form the basis of agriculture. Irrigation is carried out by means of a system introduced from the north, and the agricultural techniques largely resemble those of that section of the Sahara inhabited by Northern Tuareg, though there are certain differences. A new garden in Ayr is prepared by cutting and burning away the wild vegetation of trees, bushes, herbs,
and grasses. By crop rotation (wheat and barley in winter; maize, millet, and sorghum in summer) [242]
it is possible to cultivate the same garden plot for a few years in succession – up to six or seven years, it is said. After this time it becomes necessary to make a new garden, or to manure the old garden plot with camel and cow dung whilst manure (*taki*) from other animals or from human beings is said not to be used, as it would cause the crops to become inedible. A well-manured garden plot can be cultivated continuously for about fifteen years. But fertilizing is not practised by all agriculturists, and to my knowledge they do not carry fresh soil to the garden plots as is the case with the agriculturists
of Ahaggar. Agriculture in Ayr therefore frequently resembles shifting cultivation, though plots are [311]
irrigated, and deserted garden land is frequently seen in the valleys where agriculture is practised.

AGRICULTURAL IMPLEMENTS AND THE PRESERVATION OF CROPS

24/ The hoe forms the basic agricultural implement in Ahaggar and in Ayr. The type of hoe used in
412 Ahaggar is known as *ugelhim*, and it is akin to that in general use among irrigation farmers of the
northern oases. It has a very large and heavy iron head provided with a ring for the shaft. I believe
that this type of hoe is particularly fitted for irrigation work, but it does not seem to be in general
use in Ayr. I have seen it at Iferwan in Northern Ayr where agriculturists have much contact with
Tasilé-n-Ajjer, but I have not seen it further south in the Massif where it seems to be unknown. The
common type of hoe in Ayr is different; it is named *tagumit* and is hafted by means of a tongue (Fig.
[171] 143d). The same type of hoe is widely distributed in Africa south of the Sahara, and it is perhaps to
be considered the oldest type of iron hoe within the continent (cf. Feilberg 1934, p. 228–278).

241 The hoe is used for agricultural work in general, for digging irrigation canals, making garden beds,
and for the preparation of the soil. The hoe is not used for sowing cereals. Sowing in Ayr is known
as *anabal* and is performed in the following way:— As many seeds as can be kept between the first
and second fingers are pressed a little into the soil, and water is led into the garden beds immediately
after sowing. I have myself never watched sowing, but I was told in Ayr that it was frequently done
[778] by old women. I think that this is probably connected with the belief in the mystic power known as
[841] *elbaraka* so characteristic of all North African peoples. For cereals contain this mystic power, which
can be spoiled by unclean women. It is considered harmful to the *elbaraka* blessing if cereals are
241 handled by menstruating women (cf. Westermarck 1926, I, p. 230). The hoe is used for weeding,
412 but the agriculturists of Ayr also have a special implement for this particular task. This is known as
elgechwad and consists of a curved semi-circular iron blade hafted to a short wooden handle by
means of a tongue (Fig. 143e). The semi-circular blade is sharpened at its outer and convex side which
is pushed against the roots of weeds.

243 Various methods are used for the harvesting of crops. In Ahaggar and in Tasilé-n-Ajjer wheat and
[412] barley are always harvested by means of a sickle (*amreh*) (Fig. 143a–b). The sickle in Ayr is known
as *elgechwad*, like the weeding implement mentioned above. It is not used for harvesting crops, but for
the cutting of annual grasses to be stored for fodder (Fig. 143f). In Ayr both wheat and barley are
245 harvested by drawing the straws from the ground with the hands. In Ahaggar and Tasilé-n-Ajjer
sickles are also used for harvesting dates, while the date-growing agriculturists of Ayr use another
method. They do not cut the bunches, but proceed in the following way: When dates begin to ripen
they enclose every bunch in a plaited pouch to protect the fruit from the ravens and other birds. The
dates are harvested one by one when they are ripe, while those not yet fully ripe are left to be harvested
243 later. Harvest is done in this manner about once a week until all dates have become ripe. Maize in Ayr
is harvested by drawing the plant from the ground with the hand, and this work is normally facilitated
by loosening the soil around the roots by means of the hoe. I do not know how maize is harvested in
Ahaggar, where this plant is not so widely grown as in Ayr. Everywhere among agricultural people of
Ahaggar and Ayr millet and sorghum are cut with a knife (Ahaggar, *elmusi*; Ayr, *ezegiz*) (Figs. 171–172)

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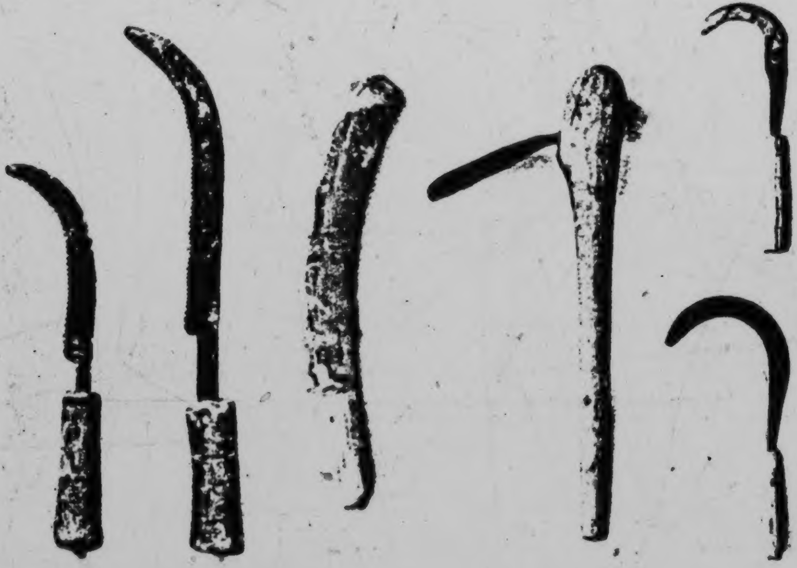

Fig. 143a–f.

a–b. Sickles of the type used for harvesting wheat and barley in Ahaggar.
They are known as *amrek*, pl. *imrehen*.

a. From Tamanṛaset. Total length, 0.271 m. (N.M. G. 5256).
b. From Abalessa. Total length, 0.365 m. (N.M. G. 5828).

c–f. Agricultural implements from Ayr.

c. The short threshing stick (*aburi*). From Iferwan. Dimension: 0.49 m. (N.M. G. 6618).
d. The hoe (*tagumit*) hafted by means of a tongue. From *Kel Ewey* Tuareg near Agadez. Dimension: 0.70 m. (N.M. G. 6615).
e. The semi-circular weeding implement (*elgechwad*). From Iferwan. Dimension: 0.295 m. (N.M. G. 6617).
f. The sickle (*elgechwad*) which is used for cutting annual grasses. From Agadez. Dimension: 0.305 m. (N.M. G. 6613).

241 [462] It seems as if millet and sorghum are always harvested by women, while dates are harvested only by men. Other crops are harvested by persons of both sexes.

243 Threshing methods are the same in Ahaggar and Ayr. Wheat and barley, which are sheaved and dried before threshing, are beaten with a stick (Ahaggar, *aburi*; Ayr, *aburi* or *asedbaḳ*). This threshing stick is an unfashioned bough of trees or date palms, but a short and club-like implement is also frequently used in Ayr (Fig. 143c). Threshing of millet, sorghum, and maize is done by pounding in a

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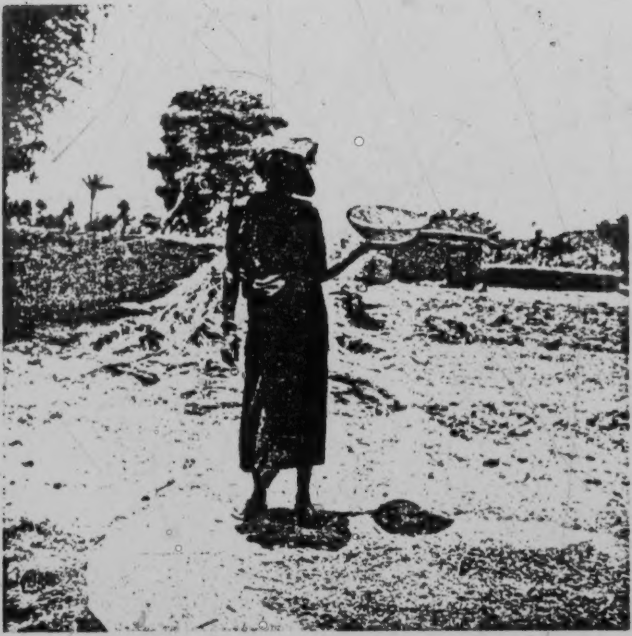


Fig. 144. *Kel Ewey* woman winnowing grain by shaking it in a plaited bowl. Ayr. Iferwan.

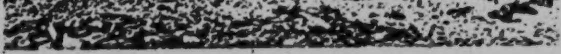
243 [415] large mortar. Winnowing of cereals is performed by shaking the seeds in a plaited bowl or tray to let husks and other impurities be removed by the wind (Fig. 144).

251 343 The Northern Tuareg use the following means for storing of crops:— (1) *taddat*, that is a skin bag containing grain, dates, and the like, hidden under stones and rocks in the mountains; (2) *égend*, or *anu*, an underground storeroom lined with mats. It is used for cereals, including wild seeds, and is found both among agriculturists and pastoralists (Fig. 146); (3) *tarassana*, a grain silo built from stones and mud (Fig. 145). Nowadays such storerooms are not only used by agriculturists but also by pastoralists. However, this type of storeroom is said to have been introduced to Ahaggar with the introduction of irrigation agriculture about a hundred years ago, and was originally unknown to pastoral Tuareg.

[136] Among the *Kel Ferwan* Tuareg all storerooms for cereals are known as *tédengewt*. The storing of vegetable food products in skin bags covered with stones or hidden under rocks is apparently unknown – perhaps because of the numerous small rodents and the rich insect life which includes numerous white ants. Underground storerooms like those of Ahaggar are used by agriculturists and pastoral Tuareg alike. They are frequently excavated so deeply that they can hide a grown man standing in

them. They are lined and covered with mats as in Ahaggar, and though they may be used for the 251
storage of wild seeds they are mainly used for grown cereals and are generally found in or close to 343
gardens. Grain silos built of stones and mud – the *tarassana* type of Ahaggar – are said to occur among the *Kel Ewey* but I have never seen such storerooms in their villages, nor have I met the typical African storeroom built of straw and resting upon poles until south of the Massif in Damergu where they are used by shifting cultivators. Large earthenware containers shaped like cooking pots are used [415]
to store vegetable products (cereals) in certain villages, particularly at Iferwan. Pastoral Tuareg of Ayr have the underground storerooms for the preservation of surplus grain and other vegetable products. Cereals to be consumed in the camps (notably millet) are kept in large skin-bags resting [415]
upon poles that they may not be damaged by white ants. The Ahaggar Tuareg also preserve cereals in their tents in skin-bags.

Irrigation agriculture is a strenuous task, but it is less influenced by climatic conditions than all 241
other occupations practised in the Sahara. The farmers are not exposed to the same disasters of drought [461]
periods as are pastoral Tuareg in the north, though it is said that rain is a direct blessing also to irrigated crops. But cultivated plants are exposed to certain dangers, e.g., locusts, and crops do not always thrive as they should. Bad luck in agricultural activities may in the opinion of the farmers be due to [272]
some mystical power or other. It may arise from incorrect treatment of cereals and dates so that they [278]
lose their *elbaraka*. Menstruating women, as mentioned above, are dangerous to vegetable food, and [841]
this is also true of the fire, for which reason one should never throw date kernels into the flames. The [754]
farmers also fear that their crops may suffer damage from the attack of the *Kel Asuf* spirits, and particularly from the attack of the malignant force attached to the "evil eye" or the "evil mouth". To protect [237]
their crops the farmers frequently use amulets such as broken pots and skulls of domestic animals (notably of donkeys), which are considered an effective means against the "evil eye" and the "evil mouth" (cf. Nicolaisen 1961, p. 133 f., 160).



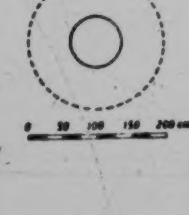


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Fig. 145. Grain silos of the *tarassana* type built of stones and mud. Ahaggar, Abalessa.
Fig. 146. Cross section of a subterranean storeroom for cereals, and the like (*égend*). Dimensions according to Foucauld: 2.00 m–2.50 m deep, 2.00 m in diameter at the bottom, 0.75 m in diameter at the surface (cf. Foucauld 1951–52, I, p. 459 f.).

[text continues on p. 209]

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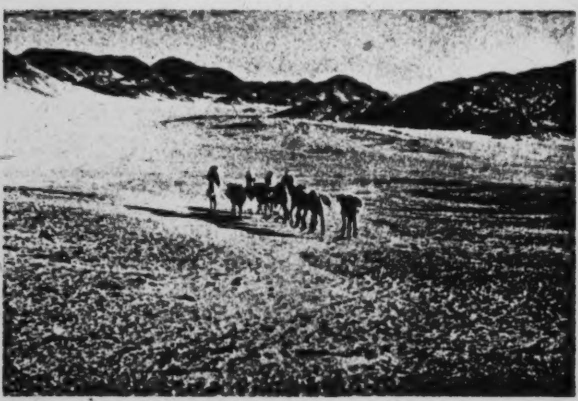

Fig. 147. Tuareg caravan in the barren desert between Ahnet and Ahaggar. The ***Kel Ahnet*** tribe.

TUAREG CARAVANS

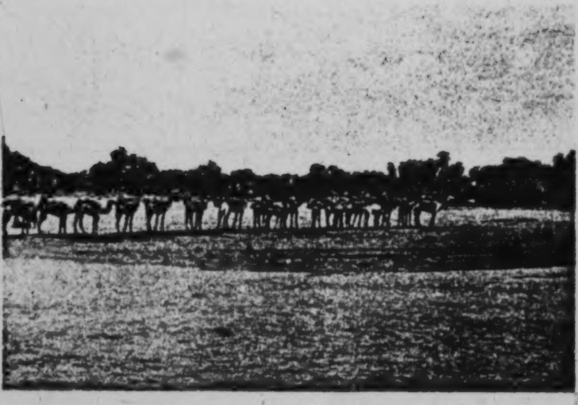

Fig. 148. Caravan crossing the flooded river bed of Oued Dabaga in Southern Ayr. *Kel Ewey* Tuareg.

Caravan Trading

Caravan trading of the Sahara has suffered severely from the European colonisation of Northern 178
Africa. The establishment of ports and railways in the Sudanese area and the abolition of the slave- 437
trade have brought to an end the large caravans passing through the desert. In recent times another 484
heavy blow has been struck against the caravans, for transportation is more and more taken over
by trucks which can easily pass through the open desert country. Many pastoralists of Northern [433]
Africa suffer from the decline of their trade, which for centuries has been an important stabilizing
factor for their subsistence. The decline of caravan trading is also strongly felt in the oases, which [366]
have played a very important part as trading posts or trading stations. Some of these oases have far [161]
fewer inhabitants nowadays than in the past, and it is most difficult for many sedentary people of the
oases to exist. The decline of the trade has been felt also among the pastoral Tuareg. But caravan
trading is still important to most of them, and many of them could not support life without it. To
understand the important role of caravan trading we have once more to return to the economic values
of subsistence activities.

CARAVAN TRADING OF THE AHAGGAR TUAREG

The Ahaggar Tuareg cannot live exclusively on stock-breeding products all the year round – not even 433
in good years when annual pasture is well developed in autumn and early winter. Even in a good 262
year the nomads mainly eat vegetable food throughout the hot season, and some bread or porridge
is also consumed during the period of abundant milk yields. It is true that nomads can subsist entirely
on milk for long periods, and that some people do so for weeks or even months. Galan says that
pastoralists of of Ahaggar, when they live entirely on milk, can do with four litres a day per person
(Galan 1951, p. 231). But it is estimated by the Ayr Tuareg that they need about eight or ten litres a
day to live entirely on milk, and they all claim that they get weary from constant milk drinking. They [261]
say that though they do not feel hungry when they live exclusively on milk they experience a peculiar,
unpleasant feeling in the stomach. The relative importance of stock-breeding products (mainly milk)
and vegetable food (mainly wheat, millet, and dates) may be seen from the diagram Fig. 151.[1] In a
good year there is normally some possibility of collecting wild seeds for bread and porridge, but the
Tuareg claim that they cannot easily cover their need of vegetable products even in a year when milk
is abundant. And milk is not always abundant. We can estimate that for two or three good years 433

[p. 209]

[1] [cf. p. 216]

433 there will be one entirely dry year throughout, during which stock-breeding products have little or
no value as food, and in such years of dry pasture there will also be very few wild plants to collect.
Hunting, which plays little part for most Tuareg nowadays, is also of little value in an entirely dry
year when many game animals die or migrate to other regions with more favourable pasture. It would
seem obvious for pastoral Tuareg to do the same and to take their animals to grazing grounds outside
of Ahaggar – particularly to the southern plains where pasture is normally better than in their own
country. We have seen that most Ahaggar Tuareg in bad years have their she-camels far from Ahaggar
in the Tamesna plains or in the country north of Adṛaṛ-n-Foṛas. We have also mentioned that, under
very severe conditions, camps of Ahaggar and Ahnet may move to these southern regions with their
flocks, though extensive goat-migrations are not always profitable. But most Tuareg remain in Ahaggar
even in very dry years with their camps and flocks. Some of the animals will die, and none of them
242 can be mated so that the flocks may rapidly decrease. During such years of drought the Ahaggar
[242] Tuareg live so to speak exclusively on agricultural food products of which they get only a part from
their gardens grown by sedentary agriculturists (the *Ḥarratin*, or *Izzegaṛen*). It is mainly through cara-
[437] van trading that the Ahaggar Tuareg acquire their vegetable food products. Their two important trading
[484] expeditions to the Tidikelt oases and to the Sudan are carried out anually for the main purpose of
acquiring dates and millet.

437 Trading with the Tidikelt oases (Awlef and In Salah) is based mainly upon a surplus of goats, camels,
439 butter and cheese, and on dried meat. But many Tuareg who obtain large amounts of millet from the
Sudanese trading expedition also sell part of their wheat grown in their own gardens in Ahaggar, and
Sudanese articles bought during their south-bound trading expedition. In a dry year some Tuareg may
choose not to visit the Tidikelt area as they have too small a surplus for trading. The south-bound cara-
[312] vans, on the other hand, are rarely prevented from going as their main trading object is rock-salt of an
excellent quality mined at Amadṛor north-east of the Ahaggar Massif. Both north-bound and south-
[221] bound caravans will set off in autumn when the hottest season has come to an end, that is at the end
of September or at the beginning of October.

487 The caravan route from Tamanṛaset in Ahaggar to In Salah in Tidikelt is about 750 kilometres,
and the route is rather difficult because pasture is normally lacking for three to four days of the
484 journey. Most Tuareg who cross this part of the desert therefore bring with them large supplies of
[824] the dried *tullult*-grass (*Aristida pungens*), which also serves as fodder for the pack-camels during the
stay in the oases around which there is little pasture. The journey takes about twenty days in each
direction, and the north-bound caravans return to Ahaggar again already in December or in January.
439 The traders return with their camels loaded with dates of which a part may be re-sold in Ahaggar
(Tamanṛaset), but they also buy European cotton and other European articles, which are cheaper in
the north, and woollen blankets woven by sedentary people of the northern oases.

484 The south-bound caravans are very extensive. The towns visited in the south are Agadez, Tawa
487 Tanut, and Zinder. The distance from Tamanṛaset to Zinder is, as the crow flies, about 1200 kilo-
metres, while the distance from Tamanṛaset to Amadṛor, where salt is mined, is about 300 kilometres.
In total the caravan journey from Ahaggar to Zinder and back again for many Tuareg amounts to
more than 3000 kilometres. The south-bound caravans are organized as follows:— Slaves take the

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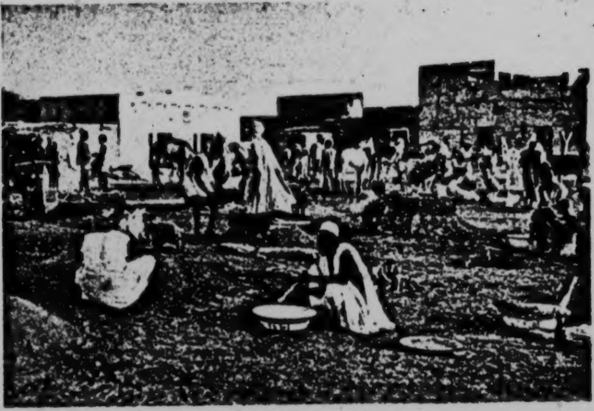

Fig. 149. The market place of Agadez. In the front negroid Hausa men roasting small pieces of meat on a spit; in the background Tuareg camels offered for sale.

484 pack-camels to the salt pit of Amadror to mine salt in the hot season. They load the camels with salt
487 and bring them to the camp where further preparations for the journey are made. When the caravans
[317] have started southwards they stop in the Tamesna plains and rest there for at least one month to allow
the pack-camels to feed on annual pasture, and, if necessary, to exchange the pack-camels with others
[437] kept by the Ahaggar Tuareg in Tamesna. Thereupon the caravan will continue towards the millet-growing
[221] towns and villages of the Sudan to bargain with the Hausa. The caravan returns to Ahaggar
again at the end of March or at the beginning of April, so that the total duration of a south-bound
caravan is up to six or seven months.

433 The Sudanese millet trade is of extreme value to the subsistence of the Ahaggar Tuareg. It is partic-
439 ularly important to their economy that they obtain millet for non-nomadic products transported by
camels, which are mainly bred outside of Ahaggar. The millet trade is consequently not much influenced by Ahaggar's changeable climate. According to official statistics, the Ahaggar caravans in 1946
exported 375 tons salt, and imported 720 tons millet, while the cereals grown in Ahaggar amounted
to 197 tons (cf. Malaurie 1953, p. 344). According to Galan vegetable food grown in the gardens of
Ahaggar in 1950 (a bad year) amounted to 121 tons wheat; 5 tons millet and barley, and 4 tons of
tomatoes – about 10 kg of wheat and 0.5 kg of millet, barley, and tomatoes per person (Galan 1951,
[416] p. 233). We see from this that the amount of cereals acquired in the Sudan far exceeds the amount
grown in Ahaggar, and as we have mentioned, the millet trade is also important for the establishment
of Tuareg agriculture in their own country where this cereal is used for payments to cultivators. It can
also be added that the Sudanese caravan trade is more important to the Tuareg than appears from
[435] the figures above. For salt is much more valuable than millet, and for one load of salt the Tuareg
receive from four to fifteen loads of millet – in 1946 the price was fifteen to one (cf. Malaurie 1953,
p. 344). It is evident that the Tuareg could not take all this millet back to Ahaggar. Most of it is re-sold

433 439 in the Sudan for such articles as camel saddles, sandals, swords, millet mortars, indigo cotton, earthenware pots, and the like. The Tuareg may also buy quantities of butter and cheese for sale to the sedentary people of Tidikelt and for their own use in dry years.

[262] The Sudanese trade constitutes the great stabilizing factor in the economy of pastoral Tuareg of Ahaggar. In return for the valuable rock-salt, pastoral Tuareg obtain the bulk of their agricultural food products (millet), butter and cheese for their own consumption in dry years, many important artefacts and notably their camel saddles and their millet mortars. They also get a surplus of millet and goods for investment in their Ahaggar gardens and for selling to the sedentary people of the Tidikelt oases.

[511] [714] There are certain Tuareg who do not engage in the Sudanese salt trade, notably those living in Ahnet; and these Tuareg nowadays have no irrigated gardens either. They acquire their necessary vegetable food products from Tidikelt (dates) and from Abalessa and Tamanṛaset (wheat). They buy these vegetable products with their surplus of goats, sheep, camels, butter and cheese, and an occasional barbary sheep. In a good year they can meet their needs of food in this way, but it is most difficult for them to subsist in dry years; and it may happen that two dry years come in succession. When I stayed among the Ahnet Tuareg in 1954–55, all camps visited were very short of food, while the Tuareg of the Ahaggar Massif who engage much in the salt trade (the *Dag Ṛali* and the *Aġuh-en-tehlé*) possessed what they needed of wheat, barley, dates, and millet.

[316] [435] 000 To-day there is a rather important market at Tamanṛaset where many Tuareg sell surplus livestock, and where they can also buy cereals and dates. But it is always profitable to sell livestock and meat in the Tidikelt oases where meat, butter and cheese are very expensive articles. Dates are cheap in these oases, European goods and woven blankets are also cheaper than at Tamanṛaset. The trading expedi-

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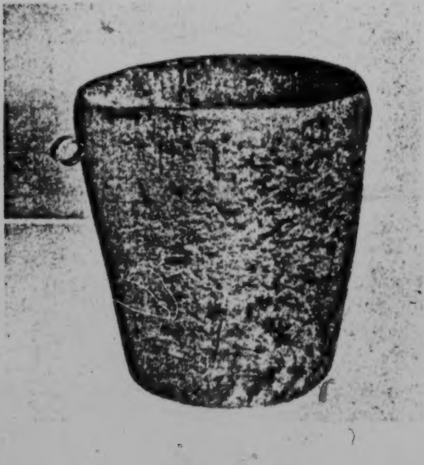

Fig. 150. Wooden measure (*muda*) which contains one kilo of cereals, or the like. The Tuareg have adopted the kilogramme into their own weight system. The proper Tuareg unit is the *taẓiwa* which, according to Foucauld, corresponds to three kilogrammes (Foucauld 1951–52, III, p. 1160), but nowadays the Ahaggar Tuareg count one *taẓiwa* as equal to two kilogrammes and a half. The Tuareg have wooden or metal measures of *taẓiwa* size, and there are also larger measures to be used for grain, dates, and the like. For units smaller than *muda* the Tuareg sometimes use a wooden measure called *tanaḳast* which holds half a kilogramme. Smaller quantities are measured with the hand held half open, and it is recognized in Ahaggar that one *taẓiwa* corresponds to 99 handfuls. In Ayr it is very common to use a little plaited bowl (*téfakemt*) as the smallest unit of measurement. Dimension: 0.140 m high, 0.125 m in diameter at the rim. (F.M. 168).

The trading expedi-
tions have remained important to the Ahaggar Tuareg, and it is clear that they would not go on trading 437
were these expeditions not profitable, for trading expeditions are extremely strenuous. Though the 484
expeditions set off when the extreme heat is decreasing, it is still very hot in the extensive barren plains 461
in autumn and in winter during daytime. Water and pasture are often extremely scarce in this deserted
country, and the Tuareg frequently have to travel rapidly. For days or weeks they live so to say on
their camels, and if camels are not too heavily loaded they may do up to 16 hours a day for several
days in succession. Under such journeys the Tuareg eat only once a day. Obviously such trading [262]
expeditions are also very hard on the pack-camels, and there is always a risk of loosing a camel during
such journeys through barren, desert country.

In this brief outline of caravan trading I have not considered those Ahaggar Tuareg living constantly 433
in the Tamesna plains and adjacent regions. These Tuareg own more livestock than the Tu[illegible]f the 184
Ahaggar Massif, and I do not believe that they engage so much in extensive trading expeditions. [133]
They are comparatively rich in she-camels which are tolerably good milk yielders in these regions [262]
most of the year, and milk is more important as food than it is in Ahaggar. I believe that most Ahaggar [438]
Tuareg of the Tamesna region acquire their necessary vegetable products by selling surplus livestock, [366]
butter and cheese at the markets of Ingal and Agadez.

CARAVAN TRADING OF THE AYR TUAREG

Among the Ayr Tuareg stock-breeding products are far more important for food than in the north. 433
Grazing conditions are better with annual pasture as a recurrent event, and the Tuareg keep bigger 262
flocks of goats and sheep, larger camel herds, and most have a few zebus which are guarded without
much difficulty. The *Kel Ferwan* Tuareg of Southern Ayr can live on milk for a large part of the year, though they, like those of Ahaggar, become tired of milk drinking if they get no solid food. There are Tuareg of Southern Ayr who live exclusively on milk for two or three months during the periods of *akasa* and *γarat* and to whom milk is important as food for at least six months. In the extremely hot season of *ewilen* when milk is very scarce most Tuareg eat millet porridge with a little milk or sauce (cf. p. 242 f.), and Tuareg who are not very wealthy eat millet porridge to a great extent all the year round, so that the necessary amount of millet for many camps is about 0.5 kilo a day per person, or
about 180 kilos a year. In Ayr there are fairly good possibilities of collecting if there are not too many [222]
locusts, but most Tuareg do not collect a great quantity of wild seeds, and claim that they would be
very badly off without millet, as seeds of wild plants are not very nourishing in comparison. In one [261]
year during the second world war (in 1943) they say that millet was very hard to get; it was then very difficult to subsist and a great many animals had to be killed for food. Millet is almost indispensable to the Tuareg; they also consume other vegetables derived from agriculture, notably wheat, maize, and dates, but millet is the most essential non-nomadic food product. Normally it can be acquired by most Ayr Tuareg without much difficulty.

The people of Ayr obtain their provisions of millet from the Sudanese area of shifting cultivation, 439
notably from Damergu (Tanut). Millet can also be bought at Agadez whereto it is brought by Tuareg 437

439 caravans of the south or by Ayr Tuareg who import more millet than they need for their own use.
437 But millet is cheaper in Damergu than at the Agadez market, and most Tuareg prefer to organize
[435] their own millet caravans with camels and donkeys as pack-animals. In Damergu most Ayr Tuareg
[492] get millet in exchange for livestock or they buy it for money. Their caravans are not always very large,
[476] for the Southern Ayr Tuareg of the *Kel Ferwan* group do not organize their caravans co-operatively
[484] on the basis of kinship. Many individual households fetch their own millet with a few animals, and it
is comparatively easy to do so as the millet growing country of Damergu is not very far away – the
[592] distance from Agadez to Tanut is only about 300 kilometres. The Ayr Tuareg do not have to engage
in extensive trading expeditions to procure millet, and can buy millet very cheaply. A household, it
437 is said, does not have to sell a great many animals to secure the necessary supply of millet. Three or
439 four camel loads will cover the needs of most households, and this amount of millet can be acquired
435 for comparatively few animals – particularly if the animals vended are sheep, which have become
592 very expensive in recent times owing to the rapid increase of Europeans at Agadez. An extremely good
162 sheep or ram for slaughtering can bring in 2000 to 3000 West African francs, and a Tuareg household which buys millet in Damergu will need less than 10,000 francs to acquire the quantity necessary for a year. Thus the Ayr Tuareg can obtain their millet for a few sheep, and there are very few, if any, who do not posses this surplus, and it should be repeated that the increment of livestock is never stopped by drought periods as in the north. The extremely high price for sheep for butchering is a recent phenomena due to the increase of the French population. Fully-grown sheep or rams are expensive, and this is also the case with fowls, while goats are cheap. I believe we can estimate that a household would have to sell about 15 goats anually to obtain the amount of millet necessary for one year's consumption. However, there is little doubt that it has always been quite easy for the Tuareg of Southern Ayr to obtain the requisite amount of millet in exchange for livestock.

262 Millet and milk constitute the basic nourishment of the Ayr Tuareg, but they are very fond of an
[222] occasional change of food. And I believe that this is one important reason why the Ayr Tuareg, like
those of Ahaggar, collect wild seeds even in years when grown cereals are abundant. For a change,
the Ayr Tuareg are also extremely fond of dates which are not grown to any great extent in their own
country. A few Ayr Tuareg own palms yielding dates of poor quality, and I think that a few house-
[439] holds also obtain some dates from Ingal. However, most dates eaten in Ayr are imported from the oasis of Bilma, situated in the very barren desert country between Ayr and Tibesti, about 700 kilometres north-east of Agadez.

437 The trade with Bilma is apparently an ancient one, and its foundation is salt which is of a very bad
439 quality compared with that mined at Amadror in the north. The rock-salt of Amadror is excellent
[317] for food, and though there is one good quality of Bilma salt that is used for food by the Tuareg of
[263] Ayr, most salt from Bilma contains much soil and other impurities. This impure salt is excellent for
[233] domestic animals which, in Ayr and further south where salt pastures do not exist, need a lot of salt. The Ayr Tuareg, and particularly those who do not visit the country of Azaouaɣ at the end of the rains, need salt not only for their own food but also for their domestic animals. They obtain this from Bilma, which is visited by caravans in autumn or in the early winter. The inhabitants of Bilma, like other oases-dwellers, are in constant need of cereals and meat, and these products are imported

by the Tuareg of Ayr, the *Kel Geres*, and other Tuareg. The Tuareg obtain salt generally in exchange 437
for millet, but they also bring with them dried meat, and meat from animals newly slaughtered; and 439
although this meat is largely rotten when it arrives at Bilma it is easily sold to the oases dwellers who
are yearning for meat. The oases dwellers have little to subsist upon but dates of which they have a
surplus. This is purchased by the Tuareg, who get two loads of dates for one load of millet. The 178
Bilma trade is less important nowadays than it was at the beginning of the century. In 1922 the Bilma 484
caravans comprised about 7000 camels (Buchanan 1926, p. 83), while in 1908, when the trade was
already decreasing, caravans numbered about 20,000 camels (Abadie 1927, p. 292). Caravans still go
to Bilma to fetch salt and dates, but the salt trade is not so profitable to-day when Bilma salt can be 435
bought fairly cheaply at Agadez, as the trucks bringing provisions from Agadez to the French admin- 494
istration and to the merchants of Bilma, take salt back with them when they return. The Ayr Tuareg 437
do not organize their trading expeditions within family groups or sections as in Ahaggar. A Tuareg 602
who does not want himself to go to Bilma may let a kinsman or a friend trade for him with his camels.
The payment for this is a large loaf of salt which constitute one sixth or one seventh of a camel load.

The Ayr Tuareg do not generally obtain salt from the pits of Tegidda-n-tésemt though this place 317
is not very far from the Massif to the west. They say that the Tegidda salt is not as good as 439
Bilma's. The salt of Tegidda-n-tésemt is purchased mainly by the *Iwllemmeden Kel Dennek* when
visiting the regions around Ingal after the rains. Some of the *Kel Ayr* who live in the extreme north 437
(the *Kel Tédalé*, and others) occasionally go to Amadṛor in the north to fetch salt which is taken down
to the Sudanese towns and villages. In years when drought prevails in Ahaggar these Tuareg take their 437
surplus of livestock to the market at Tamanṛaset, for in dry years the provision of meat, butter, and 438
cheese consumed in Ahaggar come mainly from Ayr and adjacent regions. When I stayed in Ahaggar 114
in 1954–55 a great many Tuareg of the *Kel Tédalé* came to Tamanṛaset to sell camels, donkeys, sheep,
goats, and zebus, and also brought with them large quantities of cow's butter and cheese. The route 437
followed from Northern Ayr to Ahaggar runs via I-n-aẓawa and I-n-abeggi which are the only wells 487
between the two mountain massifs. Water is very scarce and so is pasture, which is mainly limited to
a scattered vegetation of annual plants; over very large areas there is no vegetation at all. It is easy
to drive camels and donkeys through these regions, while more difficult for sheep, goats, and cattle.
The zebus easily get cut hooves from walking on stony ground, while sheep and goats suffer much
from thirst. In spite of this, all kinds of livestock can be driven through the barren desert from Ayr
to Ahaggar, even as late as the month of March which is extremely hot in the barren desert country.
The Tuareg frequently lose animals which die from thirst and hunger during the journey, but the trade 435
is nevertheless extremely profitable as prices of livestock are high in Ahaggar in dry years, while prices
of European goods such as tea, sugar, cotton, metal vessels, and the like are extremenly low compared
with the prices asked for these goods in Ayr.

The Ayr Tuareg, though owning more livestock than the Tuareg of Ahaggar, have a certain demand 433
of agricultural food products. These products are mainly grown outside of the Massif, for the farmers 439
of Ayr grow little millet, very few dates, and part of the wheat grown in Ayr is exported to the oases
of Ġanet and Ṛat in the north. Though these vegetable products can be purchased at Agadez, it is
profitable to fetch them where they are cheap, namely in the Sudan (millet) and in Bilma (dates). And

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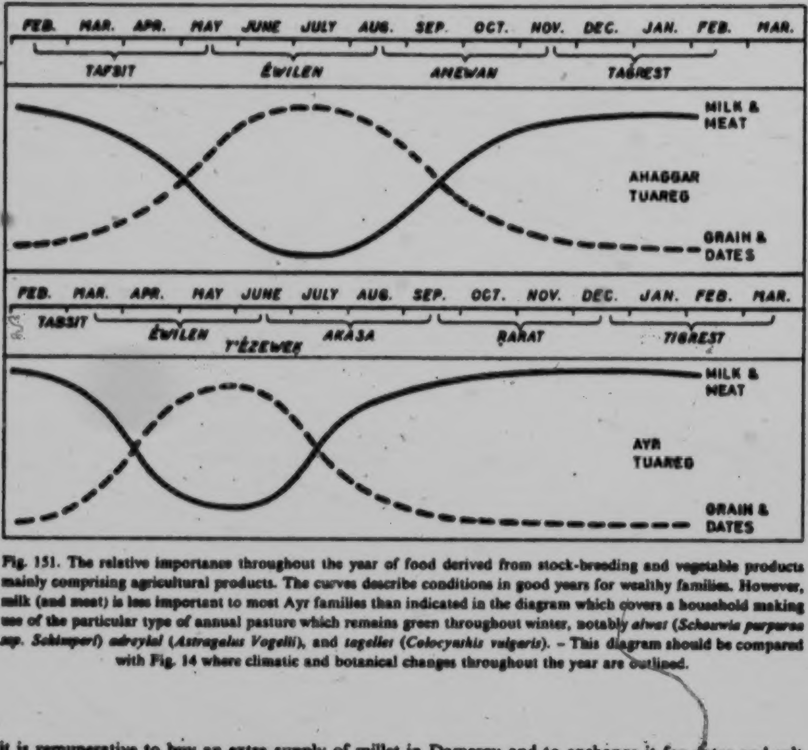

[511] [824] Fig. 151. The relative importance throughout the year of food derived from stock-breeding and vegetable products mainly comprising agricultural products. The curves describe conditions in good years for wealthy families. However, milk (and meat) is less important to most Ayr families than indicated in the diagram which covers a household making use of the particular type of annual pasture which remains green throughout winter, notably *alwat* (*Schouwia purpurea* ssp. *Schimperi*) *adreylal* (*Astragalus Vogelii*), and *tagellet* (*Colocynthis vulgaris*). – This diagram should be compared with Fig. 14 where climatic and botanical changes throughout the year are outlined.

433 439 it is remunerative to buy an extra supply of millet in Damergu and to exchange it for dates and salt at Bilma. Caravan trading is a source of profit to the Ayr Tuareg, but most of them ultimately acquire their agricultural food products in exchange for stock and stock-breeding products. Very few of them mine salt at Amadror, and most of them obtain salt in return for millet bought for domestic animals in Damergu, or for meat of domestic animals butchered in Ayr. The Tuareg cannot easily subsist without agricultural products but they can obtain them in exchange for their livestock.

233 166 [184] We see again that conditions of stock-breeding are very favourable in Ayr in comparison with those of Ahaggar and in Tasilé-n-Ajjer, where frequent drought periods make it difficult for the Tuareg to exist. It is easily understandable that the favourable grazing conditions of Ayr have caused many Tuareg of the north to migrate southwards. These migrations take place even to-day and have gone 433 on for centuries (cf. p. 411 ff.). However, even in Ayr it is most difficult to subsist without cultivated 262 cereals (millet), and we must do away with the myth that pastoralists of North Africa live entirely on milk and meat from their animals – they do not. This is true for all Tuareg I have visited, including

those of Tasilé-n-Ajjer and the *Kel Geres*. I have been informed by *Iwllemmeden* Tuareg of the *Kel* 433
Dennek group, whom I met in Ayr, that they live on millet to much the same extent as the Ayr Tuareg, 262
and that some of them have gardens cultivated by negroid agriculturists. For the *Kel Dennek* it is
expressively stated by Nicolas that they cannot live on milk, that they kill comparatively few of their
animals, and that they largely live on cereals obtained not only by collecting. Some of the Tuareg
mentioned by Nicolas are described as semi-nomads (Nicolas 1950a, p. 145 ff.). Among the Southern
Tuareg living further west in the Sudanese savannahs (the *Iwllemmeden Kel Ataram*), agricultural
products are very important to the pastoralists who may possess gardens along the banks of the Niger,
these gardens being cultivated by the *Bélla* (Aymard 1911, p. 117; Miner 1953, p. 60 ff.).

Nowadays there are no Tuareg who subsist without agricultural products, a few of them (the *Kel* [178]
Ajjer) practise a primitive type of agriculture in the river valleys, and within all groups there seem to
be Tuareg who have turned to irrigation farming as their most important occupation. In the following
section I discuss briefly the subject of Tuareg economy in the past.

TUAREG ECONOMY IN THE PAST

Tuareg culture was not profoundly altered by the advent of European military administration around 178
the beginning of the present century. Their traditional material culture has persisted largely unchanged 148
up to the present day. The major change has been the abolition of warfare and consequently the break-
down of the traditional political system, but the abolition of warfare also led to important changes
in the organization of caravan trading.

Raiding expeditions were carried out in some Tuareg groups even after the arrival of the Europeans, 175
who established small garrisons in the oases and had camel patrols roaming the country as they have 721
nowadays. Buchanan thus describes a raid carried out by Ahaggar Tuareg against the Ayr village of 148
Timia in the year 1920 (Buchanan 1921, p. 207 ff.), and raids have not been entirely unknown in Ayr
even later, though the raiders have then been severely handicapped by the establishment of the French
wireless stations which enabled the camel patrols of different areas to communicate with each other
(Rodd 1926a, p. 188). Raiding have nowadays stopped, but before the European penetration and
conquest it was so to speak an industry to be mentioned with other subsistence activities.

The Ahaggar Tuareg were known as prominent raiders and warriors in the past. The two dominent 175
chiefdoms within the group of Ahaggar Tuareg, the *Kel Ṛela* and the *Taytoḳ*, frequently raided the 721
Iwllemmeden Tuareg and the Arabs living north of Timbuktu, as these southern pastoralists were very
rich in livestock and in slaves. Some of these Tuareg and Arabs even paid fixed dues to chiefs of the
Kel Ṛela and the *Taytoḳ* in order that they should not be raided by Tuareg of these groups. However,
these annual payments did not safeguard against raiding (cf. p. 401 f.). It seems as if the south-bound
raiding expeditions were mainly profitable to the Ahaggar Tuareg, who could not so easily be raided
in return by the Southern Tuareg. The Ahaggar Tuareg also raided other neighbouring pastoralists
such as the Tuareg of Tasilé-n-Ajjer, and the powerful Arab tribe *Ulad Ba Ḥammu* with whom they
had frequent and very serious quarrels; these people raided the Ahaggar Tuareg in return. It can be

175 721 added that wars were not confirmed to fighting between these large political groups, for there was also fighting within these groups at intervals.

[648] [578] The Ayr Tuareg had as their main enemies the Tebu, the Eastern *Iwllemmeden* and the Arab pastoralists of the Tawa district. In Ayr there were also sharp disputes between various drum-groups of the Ayr federation, notably between the *Kel Ferwan* and the *Kel Faday*. The *Kel Faday* Tuareg frequently joined forces with the *Kel Dennek* in fighting the *Kel Ferwan*.

[437] Throughout the 19th century there was a risk of severe trouble everywhere in the Sahara with adjacent regions, but caravan trading was most important to Tuareg subsistence at that period in spite of these latent conditions of hostility.

175 437 Great caravans then crossed the desert carrying gold, ivory, ostrich feathers, and slaves from the Sudan to the Mediterranean, and south-bound caravans traded with salt and Arab and European goods. The Tuareg had their important part in these large trading expeditions, and they traded with their surplus of livestock and stock-breeding products much in the same way as they do nowadays. They acquired dates and millet from the sedentary farmers who were in constant need of meat, butter, cheese, and the like.

175 437 484 The organization of caravan trading among the Ahaggar Tuareg was different in the past. To-day the normal trading units are tribal sections, and this was probably also true in pre-European times, but these trading units did not travel independently as they do nowadays. Several tribes of the same drum-group travelled together under the leadership of a noble Tuareg of the dominant tribe of their chiefdom. When the Ahaggar Tuareg had no severe disputes with the *Ulad Ba Ḥammu* who dominated the Tidikelt oases, they traded with their population of sedentary farmers much as they do nowadays. [439] They brought livestock, butter, dried meat, and Sudanese goods which were bartered for dates and Arab goods. The Ahaggar Tuareg also traded southwards, but they say that they did not go further south than Agadez, as it was considered dangerous to penetrate too far into the Sudan. They also [438] say that they did not trade with salt until a few years before the arrival of the French, and that the important trading object before that time were donkeys, of which there was a shortage in Ayr. All [317] this seems to agree with Duveyrier's statement that the salt deposits of Amadṛor were not utilized in his time owing to insecurity, though he says that the deposits situated on the caravan road from Wargla to Agadez had formerly been mined (Duveyrier 1864, p. 143 f.). As to the caravan trade of the Ayr Tuareg, I believe that it was very much as it is nowadays, comprising trading expeditions to [361] [162] the millet-growing Sudan and to the Bilma oasis. It is most possible that the Ayr Tuareg also then travelled in larger units to protect themselves and their goods, for the *Kel Ferwan* Tuareg say that in the past camps were always bigger than to-day, as a camp consisting only of three to five tents could not defend itself against raiders.

175 567 [848] [171] It is known that the slave trade was carried on until the arrival of Europeans and in certain parts of the Sahara even later. Both the *Kel Ahaggar* and the *Kel Ayr* claim that they engaged in slave trading until it was abolished by the French authorities. However, it seems as if the Tuareg never engaged in this trade to the same extent as the Arabs. This is stated by Bissuel in regard to the Tuareg of Ahnet who bought their slaves from the market of Timbuktu. In general they kept these slaves for their own use, in contrast to the Arabs of Tidikelt who traded with slaves on a very large scale (Bissuel

1888, p. 21 f.). Duveyrier says that among the *Kel Ajjer* all noble Tuareg had slaves, while only some 175
of the vassals were slave owners. He says that slaves were bought and sold in towns (Duveyrier 1864, 567
p. 339). Information about the Tuareg slave trade is given by Richardson, who undertook his journeys [114]
mainly to collect material on slavery which is described throughout his journals. According to
Richardson's descriptions there can be little doubt that the Tuareg engaged in the slave trade, but I
think that perhaps his statements are tinged by his deep antiphathy to slavery (cf. Richardson 1848,
I–II & 1853, I–II). It is most possible that the Tuareg slave caravans he mentions were organized by
Arab merchants of Ṛat and Ṛadames. The former engagement of pastoral Tuareg in the slave trade
has also been mentioned by Lyon (Lyon 1821).

As to Tuareg caravan trade throughout the 19th century, we can add that all Tuareg tribes did not 175
trade to the same extent. Within most groups there were certain tribes of particular classes which 437
did not go in so much for warfare and raiding, but were keen traders. This was true of tribes of the 184
Iseḳḳemaren class in Ahaggar, and in Ahnet there were two Arab tribes allied with the drum-group
of *Taytoḳ*, namely the *Sekakna* and the *Mazil* who were responsible for the very important trade with
Timbuktu (Bissuel 1888, p. 24). Among the *Kel Ajjer* the *Ifoṛas* tribes traded on a much larger scale
than other tribes (Duveyrier 1864, p. 359 ff.). In Ayr the same was true of certain tribes of the *Kel
Ewey* group.

However, throughout the 19th century all Tuareg, with the exception of those of the nobility, engaged 175
in caravan trading which played a great part for the pastoralists, providing them with cereals and dates 437
necessary for their subsistence. Already in this century certain pastoralists had taken up irrigation 433
agriculture, and some of them practised a very primitive type of agriculture, but vegetable products
were acquired mainly through caravan trading.

[text continues on p. 221]

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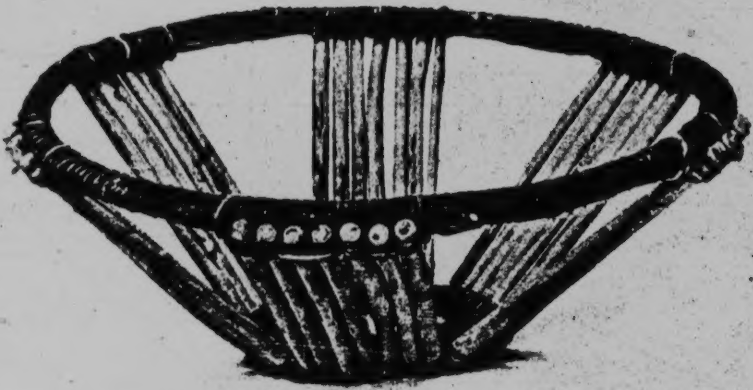

Fig. 152. Circular wooden frame to support milk-bowls and other food-containing vessels. The frame is attached to the roof of the mat tent or rests upon sticks (cf. Fig. 291). This is done in order that food and food-vessels shall not be damaged by the numerous ants. Ayr, the *Imezzureg* tribe. Dimension: 0.44 m in diameter. (N.M. G. 6663).

Food Preparation

It is natural to open this chapter on food preparation with a description of the use of milk (*akh*) among 234
pastoral Tuareg. The milk which serves as nourishment for the Tuareg derives from goats, sheep, 262
cows, and camels. Milk of all these animals is frequently drunk fresh without any preparation, and this is generally the case with camel's milk, which is not fitted for churning butter or for the manufacture of cheese (cf. p. 63). Milk of goats, sheep, and cows is used for butter and cheese, and is added to various dishes to be described below.

Fresh milk, which is known to the Ahaggar Tuareg as *akh kefayen*, is sometimes heated by means 252
of hot stones (*iḍaṛen* in Ahaggar; no particular name in Ayr). The stones heated are then put directly into the wooden milking bowl. The Tuareg practise this method mainly in winter as they do not like to drink cold milk, but milk is heated all the year round in this way with milk of animals which have just brought forth kids, lambs, or calves including camel calves. The milk taken from a mother animal until about twenty four hours after the birth of kids, lambs, or calves is known to the Tuareg of Ahaggar and Ayr as *édeṛes*. It is very rich and when it is heated by means of hot stones it becomes very thick forming almost a kind of cheese which is highly esteemed by the nomads. The milk of sheep and goats is considered *édeṛes* for two days after the birth of kids and lambs, though this term should properly be applied only to milk taken the first day after birth. The main reason for using hot stones for milk heating is said to be that milk does not get dirty in this way as it does if heated in earthenware pots over the fire (cf. p. 126).

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Sour milk (*selay* in Ayr) is consumed mainly by the Ayr Tuareg, who conserve it in skin bags and [251]
especially in calabashes, for which reason this sour milk is also known to the Ayr Tuareg as *akh n* [415] *
enu, that is "calabash milk". The milk is often left about twenty four hours for souring, and it is [252]
then placed in a very cool place in order that it may not turn into junket which is not eaten by the Tuareg.

Both in Ayr and in Ahaggar the Tuareg may add water to fresh milk (cf. p. 126), and the Northern Tuareg also add water to buttermilk (*akh n agiwir*). This mixture of water and butter-milk is in high [484]
esteem among the Northern Tuareg, and camel riders frequently carry it with them in a special skin- [415] *
bag, known as *tasufra* (Fig. 155), attached to the riding saddle. Butter-milk cannot be transported in this way if water is not added, for the milk, though already once churned, will become butter during the camel's march. The Ayr Tuareg do not drink butter-milk which is given to domestic animals, but this beverage is so appreciated by the Northern Tuareg that some of them will not drink fresh milk unless butter-milk has been added, a mixture known as *ugerengefa*, *akh imsayen*, or *umsey*.

[p. 22]

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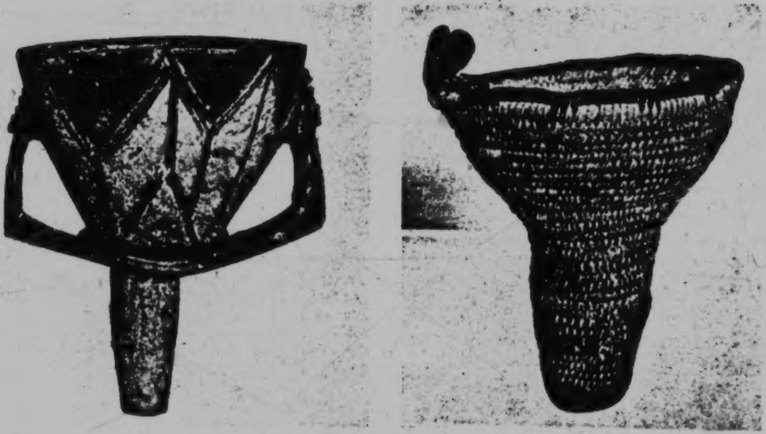

Fig. 153 a–b. Tuareg funnels (*éssegefi*, pl. *issegefa*) which are used for milk, butter, and for other liquids.

a. Wooden funnel ornamented by burning. Made by blacksmiths. Ahaggar, the *Dag Ṛali* tribe. Dimension: 0.210 m high. (F.M. 240).

b. Funnel plaited from straw of *taleggit* (*Juncus maritimus*) with the rim reinforced with leather. Made by Tuareg woman. Ahaggar, the *Dag Ṛali* tribe. Dimension: 0.135 m high. (F.M. 243).

234 In Ahaggar the method of churning butter is as follows:— Milk of the morning yield is put into a
*415 skin bag (*émesesley*) (Figs. 156–157) to remain in this bag until next morning when churning takes place. During the hot season the *émesesley*, filled with milk, is placed in the shade of the tent in daytime, while in winter it is placed in sunshine, or close to the fire. Some milk of the evening yield is sometimes added to the morning milk in the *émesesley*. Before churning the milk thus soured is poured into the proper churning bag (*agiwir*, *tanwart*) which is inflated and shaken. Churning bags may vary in size; when there is little milk to be churned a little bag is used and shaking is done holding it in the hands (Fig. 158). When milk is very plentiful, butter is sometimes churned in larger bags (*anwar*), which at one end is attached to a pole, while shaking is done by pulling the other end of the bag with
[412] one or both hands. When the milk is shaken in this way it forms small white balls of butter which are removed from the churning bag with a wooden spoon (Fig. 191) when water has been added. This
[262] white butter (*udi wa mellen*, or *tesendut*) is occasionally used for food without further preparation,
[824] but this is not normal, for newly-churned butter is generally put into an earthen pot (*téṛirt*, or *ufran*) (Figs. 186, 187 a–b) together with parts of an annual plant known as *aynesnis* (*Chlamydophora pubescens*) (Fig. 160) to be heated over the fire. Some Tuareg also add meal of dried dates, or of horns of barbary
251 sheep. After heating, butter (*udi*) assumes a dark yellow colour. It is stored in containers made of
*415 camel's hide (*tahattint*, *asagen*, *aṛañha*) (Figs. 161–162), or in Sudanese calabashes (*azenu*) (Figs.
[326] 163 a–b). A particular metal pail (*éṛir*) (Fig. 164) manufactured by native blacksmiths is also used for

butter in Ahagg

butter in Ahaggar, and butter reserved for greasing the hair is frequently kept in a large horn (*isek*) 251 415* of barbary sheep (Fig. 165). [302]

The Ayr Tuareg make butter (*wiji*) in much the same way as the Northern Tuareg. For churning 234 they use a skin bag (*anwar*), or a calabash (*azenu*), and they say that they prefer skin bags in winter, [415]* and calabashes in the hot season. Butter is heated or boiled immediately after churning, but the Ayr Tuareg do not add parts of plants, date flour, or the like. In Ayr butter is not churned as regularly as in the north. It is used mainly for cooking meat of thin animals, for a sauce which may be used [252] for millet porridge instead of milk (cf. p. 243 f.), and for greasing the hair. Among the Northern Tuareg [302] butter is added to many different dishes and particularly to bread, which is eaten almost daily by many [262] people. In years of drought the Ahaggar Tuareg get their butter from Ayr (cf. p. 212, 215), and the [438] Ayr Tuareg make much butter for export in such circumstances. They churn most butter from cow's

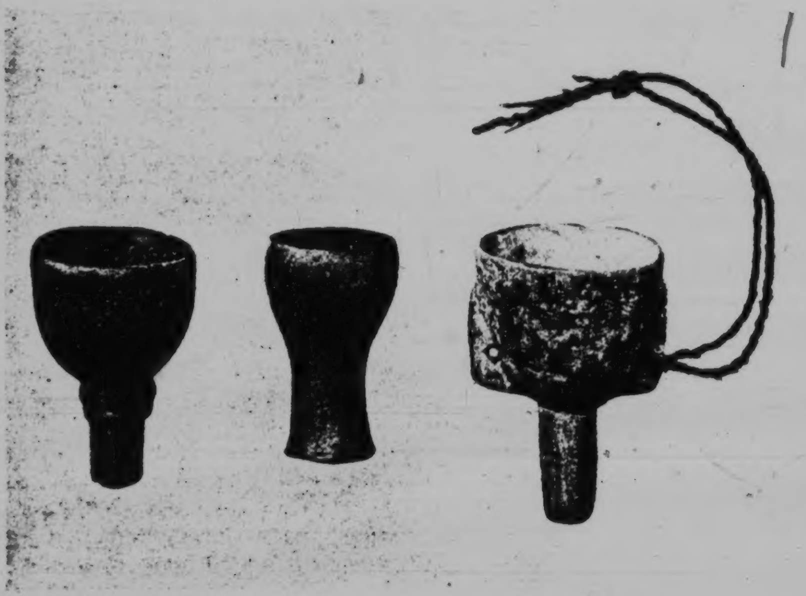

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Fig. 154a–c.

a. Wooden funnel. Made by blacksmiths. Ahaggar, the *Dag Ṛali* tribe. Dimension: 0.146 m high. (N.M. G. 5203).

b. Funnel consisting of a piece of calabash which derives from the south. Ahaggar, the *Dag Ṛali* tribe. Dimension: 0.131 m high. (N.M. G. 5202).

c. Wooden funnel with a strap of cord of goat's hair. Made by blacksmiths. Ahaggar, Olufsen's collection. Dimension: 0.175 m high. (N.M. G. 1.150).

All wooden funnels are cut from wood of the *taberekkat* tamarisk (*Tamarix aphylla*). [824]

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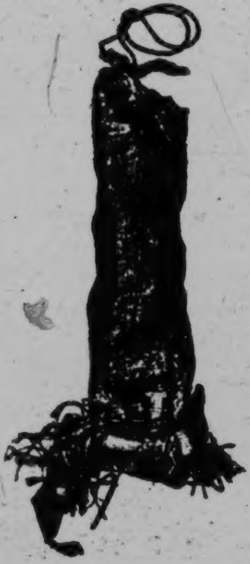

Fig. 155. Skin bag (*tasufra*) for the conservation of butter-milk on journeys. The bag is made from an entire goat-skin and has a handle of goat-hair cord tied to the skin patches of the hind legs. A leather handle is attached to the lower part of the bag which is ornamented with leather fringes. Ahaggar, the *Aguh-en-tehlé* tribe. Dimension: 0.77 m long without the fringes. (F.M. 89).

They[1] churn most butter from cow's

234 [262] milk, and this butter is not considered as delicious by the Ahaggar Tuareg as their own butter, churned mainly from goat's milk. – The use of wooden churning sticks by means of which milk is stirred in
234 an open container is unknown in Ahaggar and Ayr, so far as I know. Churning sticks are used in
412 other Tuareg groups. They are common among the Tuareg of Adṛaṛ-n-Foṛas (Musée d'Ethnographie, Neuchâtel, no. 49.2.44 & Musée de l'homme, Paris, no. 38.16.48) and among the *Iwllemmedan*
184 171 Tuareg and the Fulani (Musée de l'homme, Paris, nos. 41.19.411 & 41.19.1326).

234 [171] [184] [412] *[415] All Northern Tuareg, as well as the Northern Arab pastoralists and semi-nomadic Berbers and Arabs of the Atlas, make cheese from butter-milk, while this type of cheese is unknown among the Southern Tuareg and also among the Fulani. In Ahaggar butter-milk cheese (*awles*) is manufactured by women in the following manner:— Butter-milk is heated over the fire in an earthen pot (*téγirt*, or *efran*) (Figs. 186, 187a–b) by which process the milk is divided into two parts, namely pure water and a curdled mass of milk (*akru*). This mass of curdled milk is placed in a special basket (*aragus*) (Figs. 167a–b) hanging from a tree or a similar object to sort out the whey. Thus there remains a mass of cheese in the basket, and this mass is formed into small round pieces to be left for drying. Butter-milk cheese is manufactured in this way by all Northern Tuareg who are thus able to obtain butter and cheese from the same milk.

234 171 Another type of cheese is made from fresh milk and is manufactured not only by the Northern

[1] [i.e. the Ayr Tuareg -- Analyst]

Tuareg but also by the southern groups and by Arab pastoralists of the Sahara; it is also known in 234
the Atlas, and is on the whole widely distributed in Northern Africa. This type of cheese is known to [171]
the Northern Tuareg as *takammart* and it is manufactured as follows:— Fresh milk is heated and [415]*
then poured into a large wooden bowl (e.g., *tarelut*) (Figs. 195a–b). The milk is curdled into a mass
of cheese by means of a rennet (*akammar*) consisting of the abomasum of kids that have never tasted
anything but milk. The curdled mass of cheese is pressed with the hands and with a piece of straw- [285]
mat (*éseber*) in order that the liquids may separate. The mass of cheese is formed into small rectangular
pieces of cheese which are left on the little straw-mat for about one day. They are then removed to [417]
be dried finally on a platform (*tahaga, tafalkat*) made of branches.

Cheese made from fresh milk is known to the Ayr Tuareg as *tekemmart*; it is manufactured to very
great extent and much in the same fashion as just described from Ahaggar. The abomasum of little [224]
kids or lambs to be used for rennet is named *tederant*, and the Ayr Tuareg add parts of an annual
plant known as *ekochmaren* (*Caralluma Mouretii*) in order that the milk may curdle quickly. The [285]
Ayr Tuareg also use little mats plaited from stems of the *afezu* grass (*Panicum turgidum*) to press and
form the rectangular pieces of cheese; the Ayr Tuareg make mats (*tésebert*) (Fig. 168) particularly
for this purpose, while the Ahaggar Tuareg generally use an old piece of a tent mat (*éseber*). In Ayr
the rectangular pieces of cheese are dried on bunches of hay placed in trees (acacias), or on the top
of the mat-covered tents.

The *takammart* or *tekemmart* type of cheese made from fresh milk is in high esteem as food among 262
all pastoralists of the Sahara. It is generally eaten when newly-made and soft, though it may also be 251
stored. The Ahaggar Tuareg make this type of cheese only when milk is plentiful, while the Ayr Tuareg 234
manufacture it most of the year though the main season of cheese-making is the season of *akasa*. 221

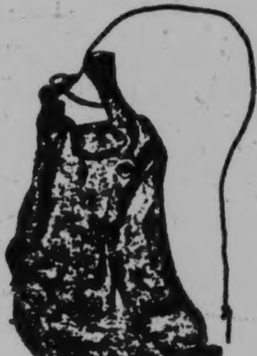

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Fig. 156. Skin bag of the *[illegible]* type used to sour milk before churning. Ahaggar, the *Afuk-en-tehlé* tribe. Dimension: 0.37 m high. (F.M. 170).

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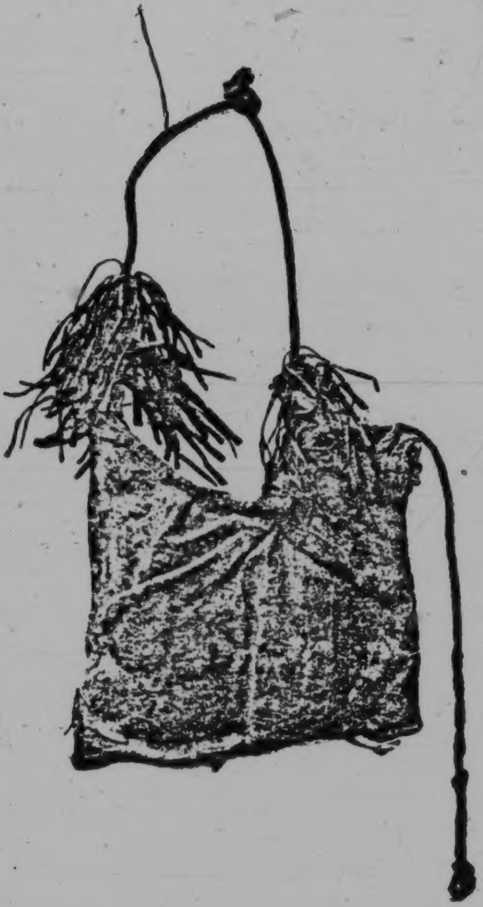

Fig. 157. Skin bag (*émesesley*) for souring milk before churning. Ahaggar, the *Dag Ṛali* tribe. Dimension: smallest height 0.20 m. (N.M. G. 5207).

234 Milk of goats, sheep, and cows is frequently mixed to make cheese of the *takammart* type, but milk of these domestic animals is also used individually for cheese-making. The very best milk is said to be sheep-milk which gives almost white cheese, while cow's milk yield a more yellow-coloured one. –
128 The use of milk, butter, and cheese in connection with various vegetable dishes will be described later in this chapter, and we shall now briefly outline the use of meat and its preparation.

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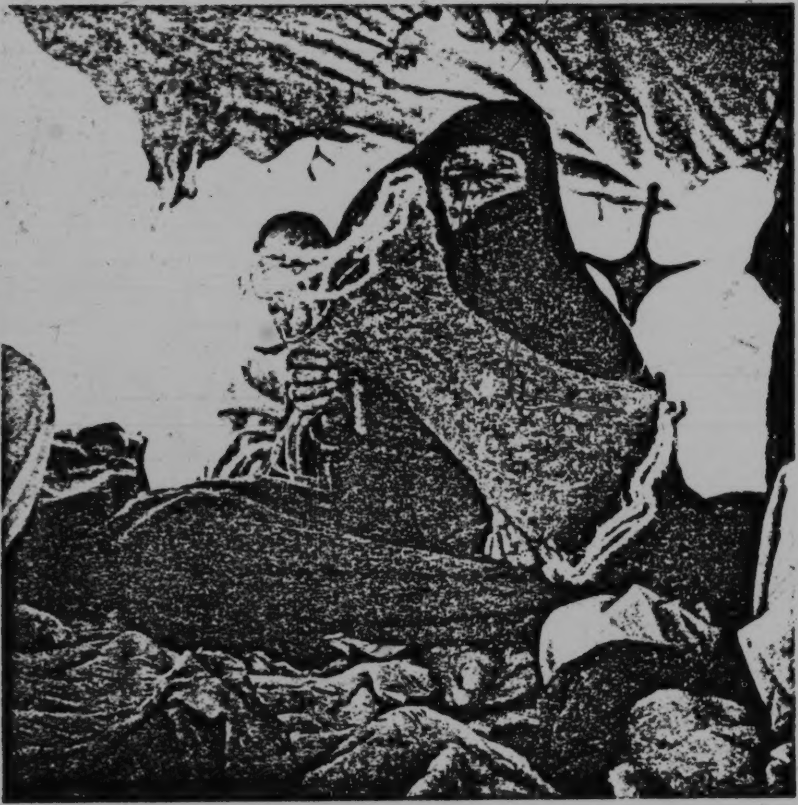

Fig. 158. Woman churning butter by shaking the inflated churning-bag (*agiwir*) between her hands. Ahaggar, the *Aguh-en-tehlé* tribe.

Meat (*isan*) is not a staple diet of the Tuareg. The Tuareg of Ayr consume more meat than the 262
Northern Tuareg, but even in the south it is not eaten daily. There are Ayr Tuareg who are reluctant
to kill their animals, and people who have much milk have very little need of meat. Meat is eaten by [574]
all Tuareg on certain festive occasions, whether social or (and) religious, and when camps are visited
by friends, certain relatives, and important guests. He-goats and rams, or barren goats and sheep, [231]
are the animals most commonly killed. The meat of sheep and rams is considered better than goat [282]
meat, and sheep are also highly esteemed for sacrifice. Whenever the Tuareg kill an animal for food 000

[text continues on p. 231]

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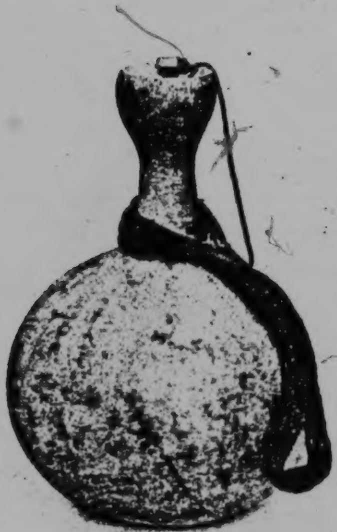

Fig. 159. Calabash (*azenu*) of the type used by Ayr Tuareg for milk and for churning butter. It is provided with a wooden stopper and a handle plaited from goat-skin. Ayr, the *Imezzureg* tribe. Dimension: 0.30 m. (N.M. G. 6664).

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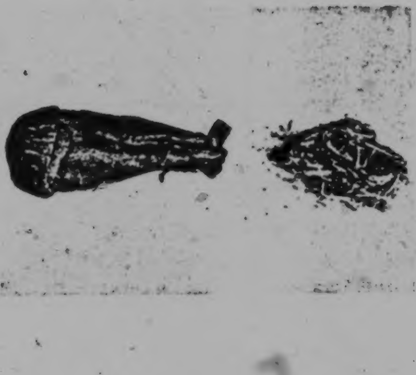

Fig. 160. Skin bag (*abelbod*) containing parts of the annual plant *aynessis* (*Chlamydophora pubescens*) which are added to butter before heating in an earthen pot. Ahaggar, the *Aguh-en-tehlé* tribe. Dimension: the skin bag is about 0.15 m long. (F.M. 153).

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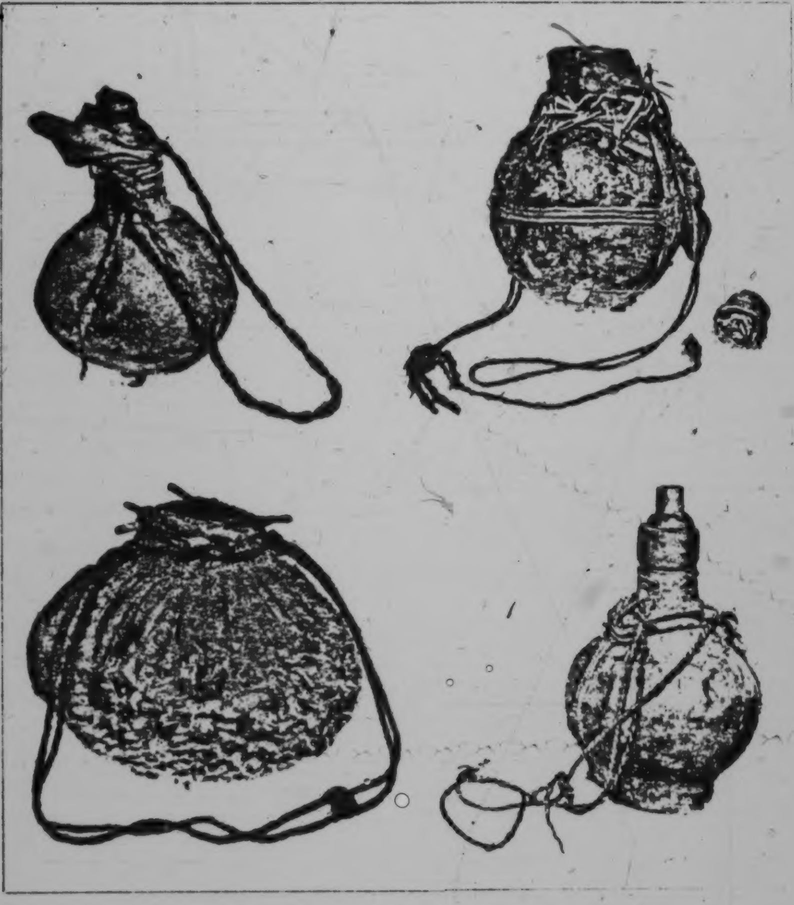

Fig. 161 a–d. Butter containers of the *tahattint* type made from camel's hide.

a. Provided with a leather stopper and a cord of goat's hair. Dimension: about 0.24 m high. Ahaggar, the *Aguh-en-tehlé* tribe. (F.M. 113).

b. Made from camel's hide covered with goat-skin leather. The leather stopper is seen to the right. The handle consists of cords made from goat's hair. Ahaggar, the *Aguh-en-tehlé* tribe. Dimension: about 0.30 m high. (F.M. 91).

c. Large container with four sticks inserted around the opening and a handle of rope made from goat's hair. Ahaggar, the *Dag Ɣali* tribe. Dimension: about 0.36 m high. (F.M. 253).

d. Large container with a wooden stopper. Ahaggar, Olufsen's collection. Dimension: 0.60 m high the stopper included. (N.M. G. 1.45).

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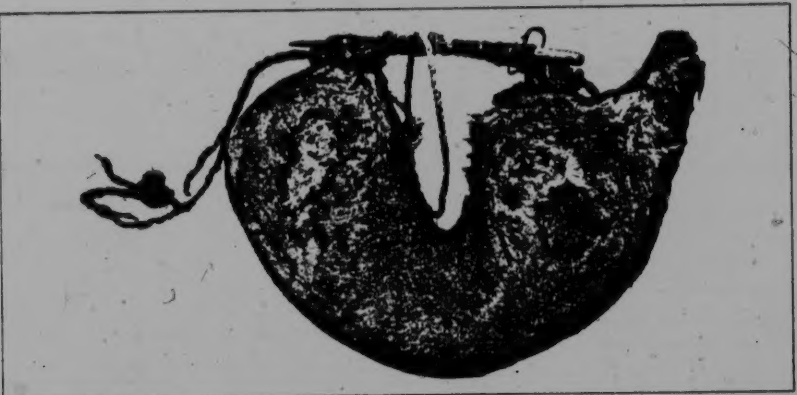

Fig. 162. Very large butter container (*aγaħha*) made from the neck-hide of a camel. It is provided with a wooden handle wound with hide and with cords made from goat's hair and bast of *absey* (*Acacia Raddiana*). Similar containers are also used for the conservation of cereals. Ahaggar, the *Dag Ɣali* tribe. Dimension: 0.62 m long. (N.M. G. 5201).

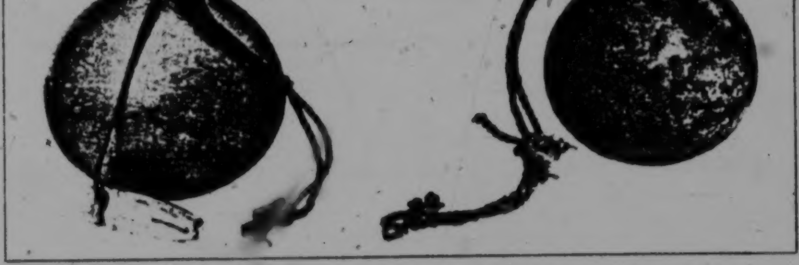

Fig. 163a–b. Calabashes used for storing butter in Ahaggar but introduced from the south (Ayr).

a. Calabash (*azena*) with a wooden stopper fastened to a leather strap and provided with a handle of cord made of goat's hair. The wooden stopper is called *azhay*. Ahaggar, the *Aǧuh-en-tehlé* tribe. Dimension: 0.620 m high. (N.M. G. 5206).

[484] b. Calabash (*tazenut*) with a handle of white goat's hair. Used for transportation of butter on journeys. Ahaggar, the *Dag Ɣali* tribe. Dimension: 0.175 m high. (F.M. 252).

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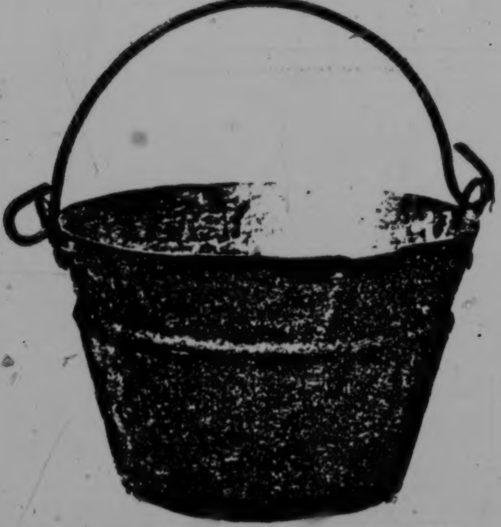

Fig. 164. Pail (*éṛir*) made from tinned brass by blacksmiths. It is used for storing butter to be used for food preparation in the tent. Pails of this type form part of the dowry in the *Dag Ṛali* tribe. Ahaggar, *Ahl Azzi* Arabs of Tamanṛaset. Dimension: 0.155 m high, 0.230–0.235 m in diameter at the rim. (N.M. G. 5820).

Whenever the Tuareg kill an animal for food 231

they perform a sacrifice, the idea of which seems to be an identification of the man and the killed animal. 782
This idea appears most clearly at the sacrifice made on the occasion of the name-giving feast seven 825
days after the birth of a child. A marabut, that is a Tuareg of the *Ineslemen* class, and the father of 553
the child stand close together with their faces towards Mecca while the animal to be sacrified is kept 782
to the ground. The marabut cuts the animal's throat and doing so cries out the name to be given to [565]
the child, and this name is thereupon repeated by the child's father. When the killing is performed in [412]
this way the knife (*elmusi* in Ahaggar; *ézegiz* in Ayr) and the cut across the throat are washed with
water before skinning is undertaken. I have dealt with certain ideas of Tuareg sacrifice elsewhere, 114
and have stated that on certain occasions they may sacrifice not to God but to the *Kel Asuf* spirits 782
(Nicolaisen 1961, p. 122 f., 147 f.). But whatever may be the ideas attached to Tuareg sacrifices all 231
animals, with the exception of the camel (cf. above p. 65), are killed by cutting their throat.

The methods of meat preparation are almost identical in Ayr and Ahaggar. The most common 252
method everywhere is cooking in an earthen pot, known in Ahaggar as *ufrun*, *téṛirt*, *alekkin*, or *talekkint* 415 *
according to its size and form, or in a metal pot (*éṛir*) of European origin. Such European pots are [772]
common everywhere in Tuareg camps, but earthen pots are still used though less durable, for earthen pots are cheap. Pots made of metal or copper, which are also known as *éṛir*, were also found among

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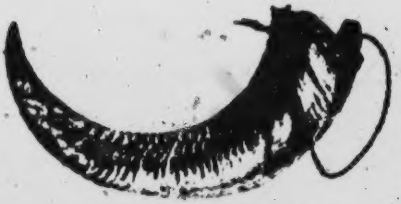

Fig. 165. Horn (*isek*) of barbary sheep used for storing butter for greasing the hair. The opening is closed with a piece of date palm bast (*asen*), and the edge is pierced with a glowing awl (*édel*) for the insertion of a cord of goat's hair by means of which the horn is attached to the tent ceiling. Ahaggar, the *Dag Ṛali* tribe. Dimension: 0.30 m long. (F.M. 236).

252 the Tuareg in the past. I believe that they were made by blacksmiths or imported from the north. *415 Pastoral Tuareg do not manufacture earthen pots which are obtained from sedentary people. The [322] cooking of meat is perhaps not a traditional method of food preparation to the Tuareg, though they seem to have used cooking pots for centuries.

252 A method of meat preparation undoubtedly introduced recently among the Tuareg, is that of spit 177 roasting. Meat roasted in this way is known as *mechwi*, a word of Arab origin, and the Northern Tuareg have taken over the method from the Arabs. The *mechwi* method is also known in Ayr, where it has perhaps been introduced by French administrators who had learned to appreciate meat thus 252 prepared during their visits among Northern Tuareg and Arabs. Pieces of sheep and goats and entire animals are prepared in this way (Fig. 174), and the meat should preferably be prepared with butter and red pepper before roasting.

The traditional Tuareg roasting method is to place entire animals (goats, sheep), or parts of them, under the hot ashes of the fire. This method is known to the Northern Tuareg as *abatul*, to the Tuareg of Ayr as *ébewil* (Fig. 175). This method of roasting meat is practised everywhere among the Tuareg, and it is on the whole similar to the method used for bread-baking described below (p. 238 f.).

Meat-roasting in the ashes is no doubt an ancient Tuareg method of food-preparation, and this also holds good for another method described in connection with the preparation of milk, namely food preparation by means of hot stones (cf. p. 221). The Ahaggar Tuareg prepare the stomachs of goats, sheep, and barbary sheep in this way, putting hot stones into the stomachs, while camel stomachs are boiled in a cooking pot and gazelle stomachs roasted in the ashes according to the *abatul* method mentioned above. These rules of food preparation seem also to be practised by the Ayr Tuareg, who put hot stones into stomachs of sheep and goats together with small pieces of meat. A stomach of goats or sheep prepared in this way, however, is given a final treatment in hot sand or in ashes close to the fire. The stomach of sheep or goats cooked [illegible] hot stones is known as *tarafa*, and a related word seems to be known also in Ahaggar (cf. Foucauld 1951–52, IV, p. 1583).

[262] The Tuareg eat most entrails of their slaughtered animals. Entrails of camels are normally boiled, and kidneys of all animals are prepared in this way. Most entrails of goats and sheep (liver, heart, and lungs) are roasted on the embers or in the ashes, and in Ayr the Tuareg roast fat put into the abomasum (*tedeqant*). The Northern Tuareg generally prepare liver and fat together in the following manner:— The liver is roasted upon the embers, is thereupon cut into small pieces which are wrapped

up with small strips of fat. The pieces of liver covered with fat are put on a slender iron or 252
wooden rod to be roasted slightly over the fire. This dish is known to all Tuareg by the Arabic word [177]
elmefuf. It was introduced among the Northern Tuareg by the Arabs, but is not widely known among
the Ayr Tuareg.

This brief description of Tuareg meat preparation can adequately be supplemented by a reference 252
to two peculiar dishes:— (1) A dish known to the Ahaggar Tuareg as *talebeggat*. It consists of meat 262
which after boiling or roasting is pounded in a large mortar and frequently served with liquid butter.
This dish is also known to the Ayr Tuareg. (2) A dish which is described from Ahaggar by Foucauld 252
under the name *abangor*. It consists of untanned skin which is eaten in case of hunger after the following 261
preparation:— Untanned skin from household implements, shields, and the like is roasted under the
ashes, and is thereupon pounded into small pieces. These are eaten without any further preparation,
or after boiling. (Foucauld 1951–52, I, p. 73).

Like other North African peoples the Tuareg dry meat of domestic animals and of game. The people 251
of Ayr know three distinct drying methods, namely (1) *iwesan*, that is meat which is boiled until it
is free of blood; it is dried in the shade; (2) *tikelsin*, uncooked meat cut into pieces to be dried on a
string in the shade; (3) *kules*, uncooked meat cut into strips which are dried for some time to be
treated with salt and various spices. This last method is not practised among the Tuareg of Ayr, but by
sedentary people of Agadez and by Negroes further south in Damergu. The Ahaggar Tuareg generally
boil or roast the meat before drying; meat roasted in the ashes according to the *abatul* method and
thereupon dried is known as *takasa*. I do not know whether the Ahaggar Tuareg also practise the [825]
method of drying raw meat like the Ayr Tuareg, but the dried *agezzerum* lizzards which they take to
Tidikelt on trading expeditions, are dried uncooked. Furthermore, the method of drying raw meat [171]
is known elsewhere in the Northern Sahara, and I have myself seen it practised among the Berber-speaking *Chawiya* of Aurès.

I conclude the description of Tuareg meat preparation with a brief note on the use of blood of living 272

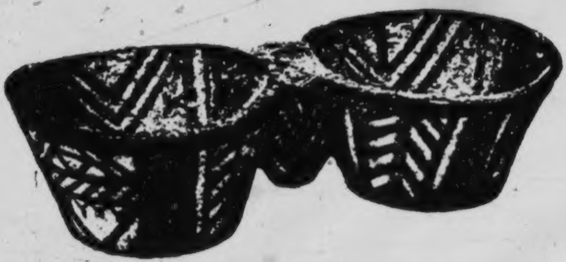

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Fig. 166. Wooden double-vessel (*azar*) to contain water and butter for greasing the hair. Similar containers with a third vessel for fine-grained sand are also found among the Tuareg. Made by blacksmith from wood of the *taburak* tree (*Balanites aegyptiaca*). Geometrical ornaments are produced by burning with a hot iron. Ahaggar, *Ahl Azzi* Arabs at Tamanrasset. Dimension: 0.241 m long. (N.M. G. 5880).

[text continues on p. 235]

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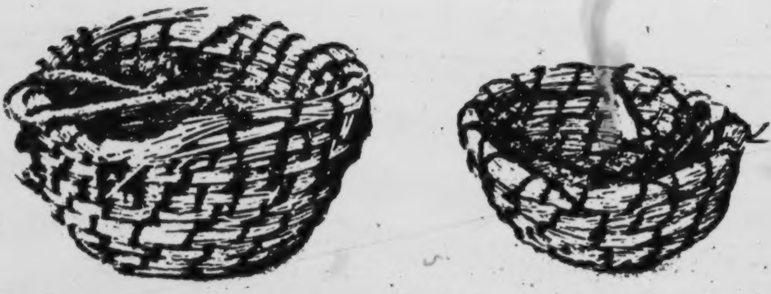

Fig. 167a–b. Baskets of the *aragus* type used for making butter-milk cheese (*awles*). They are made from straw bent into circular bundles and kept together with thin cords (*éhafilen*) of goat's hair. Ahaggar, the *Aguh-en-tehlé* tribe.
a. Dimension: 0.140 m high, 0.240 in diameter at the rim. (N.M. G. 5818).
b. Dimension: 0.100–0.105 m high, 0.205–0.215 m in diameter at the rim. (N.M. G. 5819).

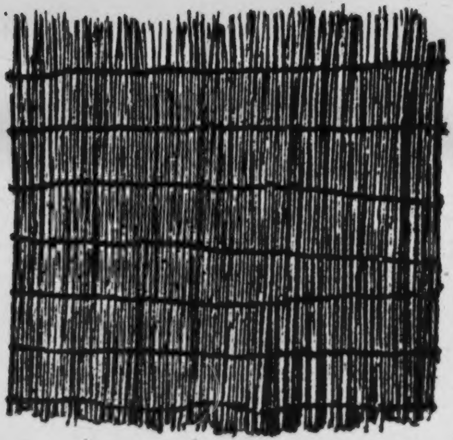

Fig. 168. The straw-mat (*tisebert*) used for the manufacture of *takommart*-cheese known as *sokommart* in Ayr, that is cheese made from fresh milk. The mat is made of stems of the *afezu* grass (*Panicum turgidum*) united with narrow leather strips. Ayr, the *Kel Akerra* tribe. Dimension: 0.46 × 0.44 m high. (N.M. G. 6612).

camels. This blood never constitutes a proper dish to the Tuareg. They bleed camels to drink their 272
blood only when they lack water on journeys in the desert. Bleeding is done according to the method [277]
described above, and the blood is collected in a drinking bowl. But the Ayr Tuareg say that they work up the mass of blood with the fingers with the result that the upper part of the amount of blood becomes more liquid, though it is always red in colour.

The Tuareg use the following implements to make cereals or other vegetable products into flour:— 412

(1) A large wooden mortar (*tindé*) with a heavy pestle (*éheṛen*) (Fig. 177). It is used in all camps 252
and villages of Ahaggar, Tasilé-n-Ajjer, and Ayr, and is in fact known all over Tuareg country. It is used mainly for pounding millet and sorghum, but it is also employed for pounding other cereals, including certain wild seeds, and for dates, cheese, meat, locusts, and the like. These large wooden [564]
mortars are manufactured by the blacksmiths of Southern Tuareg country, including Ayr, where [438]
most Northern Tuareg obtain their mortars. Among the Northern Tuareg there are also other mortar types. A small mortar which like the former rests on a foot and is known by the same name (*tindé*) (Fig. 178), is used mainly by sedentary agriculturists for pounding rock-salt, dried tomatoes, tobacco for chewing, and other plants or materials to be used in small quantities. Another type of mortar without a foot and known to the Northern Tuareg as *akabar*, or *takabart*, (Fig. 176) is found mainly among pastoralists who use it on journeys for pounding millet.

(2) A saddle quern (*tehunt*) (Fig. 179), which consists of two natural and in general unfashioned stones, is found in most camps of the Northern Tuareg. This constitutes the only grinding implement for wheat, barley, and certain wild seeds among the *Kel Ajjer*. The stones used for saddle querns are [224]
sharpened at intervals with a hard stone or some other hard object (*tasettekut*) in order that they may grind effectively. A simple saddle quern (*asar*) is also known to the Ayr Tuareg, but it is less common there than in the north.

(3) The handmill (*tasirt*) (Fig. 181) is not a traditional implement of Tuareg culture. It is widely [171]
known all over Northern Africa both by Berbers and Arabs, by sedentary peoples and nomads living in black tents. It has been introduced to Ahaggar mainly by the immigration of the Arabic speaking [167]
Harratin (Izeggaren) of Tidikelt,

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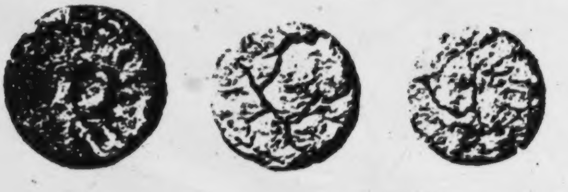

Fig. 169a–c. Pieces of butter-milk cheese (*awles*, pl. *iwlsan*).

a. Ahaggar, *Ḥarratin* of Abalessa. Dimension: 0.066–0.068 m in diameter, 0.022 m thick. (N.M. G. 5816).

b. Ahaggar, the *Afuh-en-tehlé* tribe. Dimension: 0.062 [illegible]022 m. (N.M. G. 5817b).

c. Ahaggar, the *Afuh-en-tehlé* tribe. Dimension: 0.058×0.016 m. (N.M. G. 5817c).

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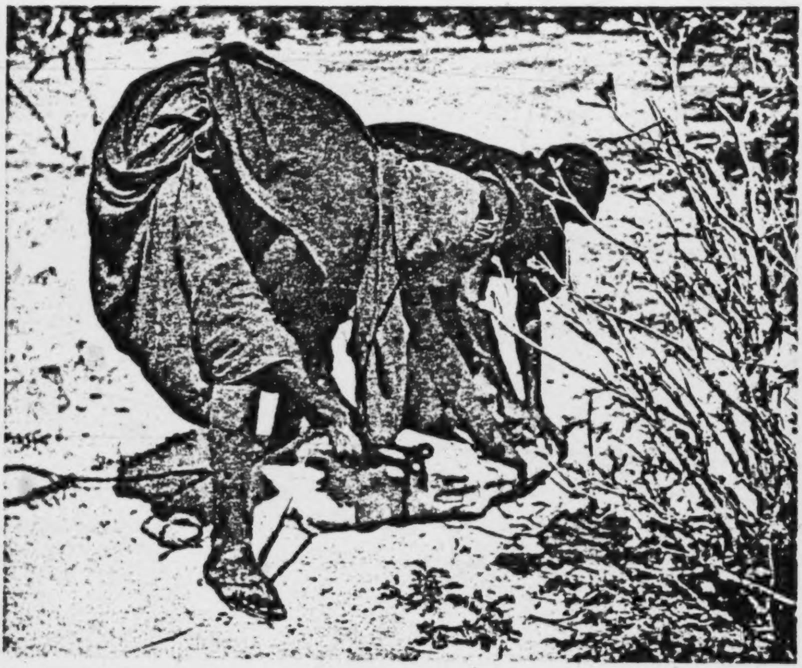

Fig. 170. Sacrificing a goat at the naming ceremony called *isnawen*. A marabut and the child's father keep the animal firmly to the ground. They stand with their faces towards Mekka and the camp of the new-born child. The marabut cuts the animal's throat simultaneously crying out loudly the child's name which is thereupon loudly repeated by the father. Ayr, the *Igendéynen* tribe.

412 *Ḥarratin* (*Iẓeggaṛen*) of Tidikelt, and it is now also found in Tuareg camps (Fig. 182), where it is
252 less frequent than the above-mentioned saddle quern. The handmill was entirely unknown among the Ajjer Tuareg during my visit to Tasilé-n-Ajjer in 1952. The Tuareg who possess handmills obtain them from the sedentary agriculturists of Ahaggar (Tamanṛaset). – When saddle querns or handmills are used, a piece of cotton or skin (*asentel* in Ahaggar) is always placed under the grinding stones to catch the flour (Figs. 180, 182).

262 The Tuareg have many different vegetable dishes. The most important are bread, porridge, gruel, and various mixed beverages.

[262] Bread is a prominent dish for all Northern Tuareg who bake it mainly from wheat flour. Wheat bread has been my ordinary dish among all Tuareg of Ahaggar and Tasilé-n-Ajjer. Lhote states that

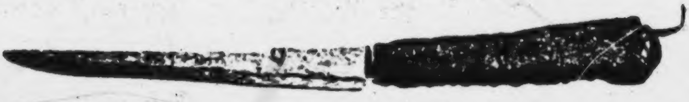

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Fig. 171. Ordinary meat-knife (*elmusi*) of the type used among Northern Tuareg and Arabs. Its broken handle is mended with hide of barbery sheep sewn with leather thread. Ahaggar, the *Deg Ɍali* tribe. Dimension: 0.28 m (total length). (F.M. 249).
All knives are manufactured by blacksmiths.

wheat bread is eaten particularly during migrations and on trading expeditions, or in periods when 262
butter is rare (Lhote 1955a, p. 262). This statement disagrees with my own experience. Wheat bread 114
is an ordinary diet of many Northern Tuareg. Bread is also baked from barley and from certain wild 324
seeds (notably *tawit*, *Chenopodium Vulvaria*; *éhéyefyef*, *Aizoon canariense*; *tullult*, *Aristida pungens*)
and wild roots (*ahakel*, *Cistanche Phelypaea*), while millet and sorghum are considered less suitable
for baking. Seeds are generally prepared for baking by grinding them into flour by saddle querns or 252
handmills. In Northern Tuareg country there are two types of bread which have been introduced as 172
a result of contact with Arabs or the Arabic-speaking *Ħarratin*. One type is named *elfetat* and is baked

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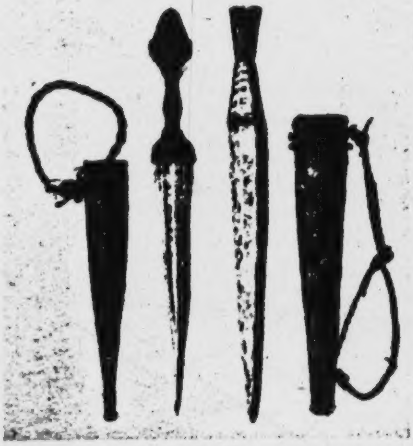

Fig. 172a–b. Meat knives.
a. Knife (*ézegiz*) of Tebu type to be carried in its sheath around the upper arm. These knives are sometimes used in Ayr. Agadez. Dimension: 0.370 m. (total length). (N.M. G. 6620a–b).
b. Knife (*ézegiz*) of the double-edged type normally used in Ayr. The *Imezzureg* tribe. Dimension: 0.377 m (total length). N.M. G. 6665a–b).

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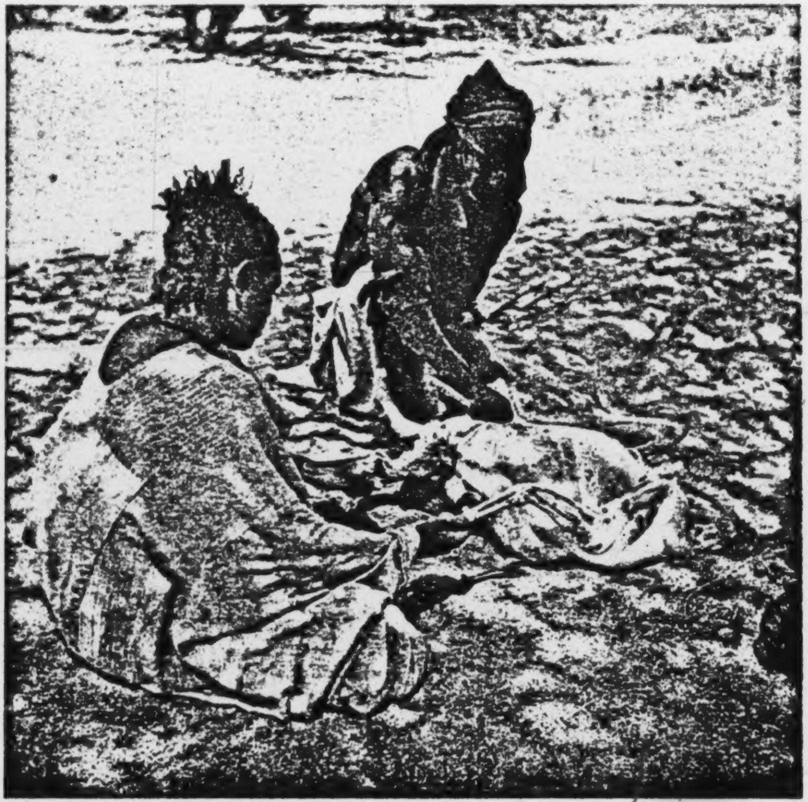

Fig. 173. Tuareg skinning a ram. Ayr, the *Igendéynen* tribe.

252 by placing the dough on a baking sheet. The other type of bread is generally known by the Arabic
word *khubz*. This is baked from dough placed in the sand close to the fire, where it is covered with
[184] hot sand, ashes, and glows. These two types of bread in Ahaggar are baked mainly by sedentary agriculturists and by Arab families. The type of bread traditionally baked by the Tuareg differs from Arab
bread in that it is not made from proper dough, but from a kind of thin porridge or gruel consisting
of flour mixed with water. This Tuareg type of bread is known as *tagella* and is baked as follows:—
A heavy fire is lit in a shallow depression (about 25–30 cms in diameter and 8–10 cms deep) made

into fine-grained sand carried from the river bed to the fire place in front of the tent. When this heavy 252
fire has calmed down the embers and most of the ashes are moved from the shallow depression to its fringes by means of a small stick, and the thin porridge or gruel of flour and water to which also a little salt is added is poured out into the depression, a spoon being normally used to remove all the gruel out of the wooden bowl in which it has been stirred. A bunch of dry grasses, herbs, or tender twigs is thereupon fired over the gruel in order that its surface may harden, and it is then covered with hot fine-grained sand, ashes, and embers in the order mentioned. If the embers are considered insufficient for baking, a small fire may be lit on the top of the sand and ashes covering the gruel-bread, which is taken out after about twenty minutes to be turned and baked in the same way on the other side for a few minutes. Baking is then finished, the bread is finally removed to be washed in water
(Fig. 183). It is broken into pieces and eaten from a large wooden bowl (Figs. 195a–b) together with 264 415*
liquid butter. It is eaten with wooden spoons (Figs. 191). 412

The type of bread just mentioned is known to people of the *Kel Ferwan* group as *tugella*. It is made 262
by very few Tuareg. Indeed, when I travelled together with Ayr Tuareg I very frequently baked my 252
own bread as I had learned to from the Tuareg of Ahaggar, because very few of the Ayr Tuareg I [122]
met were familiar with bread baking. Bread is not a staple diet of the Ayr Tuareg, and when they want to bake wheat flour they generally do so in the following way:— The flour is mixed with water to a dough which is placed upon the bottom and sides of a metal pot heated over the fire. This type of bread or bread-like dish is known to the *Kel Ferwan* Tuareg as *gurasa*. It can be mentioned that the
Kel Ferwan Tuareg also bake a particular type of bread from millet flour mixed with certain other 252
plant materials, but a bread of this kind is not baked for ordinary food, but as a kind of medicine. 261

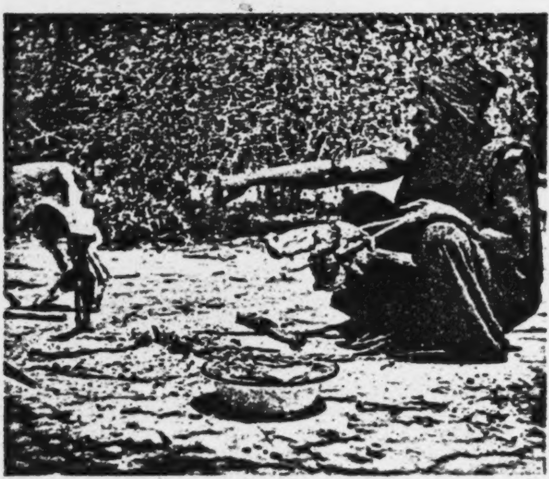

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Fig. 174. Roasting meat-lumps by the *mechwi* method. Ayr, *Ech-chikher* Tuareg of Damergu.

[text continues on p. 241]

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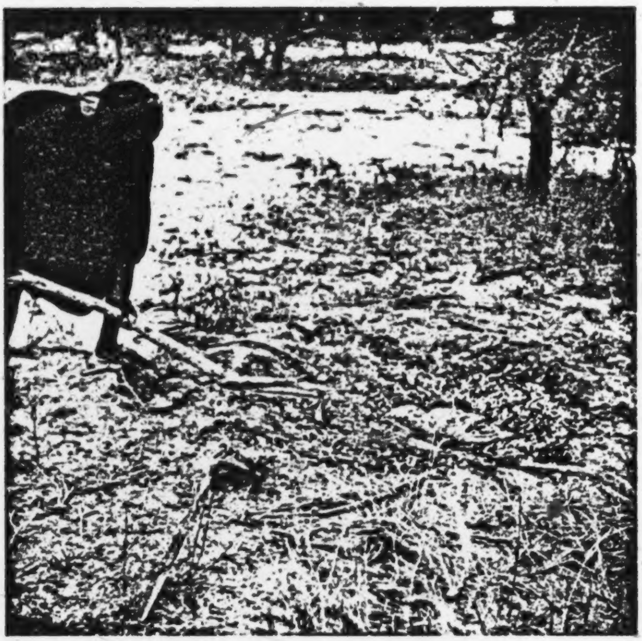

Fig. 175. Meat-roasting in the ashes – the method known as *abatul* (Ahaggar) or *ébewil* (Ayr). Ayr, the *Irawallen* tribe.

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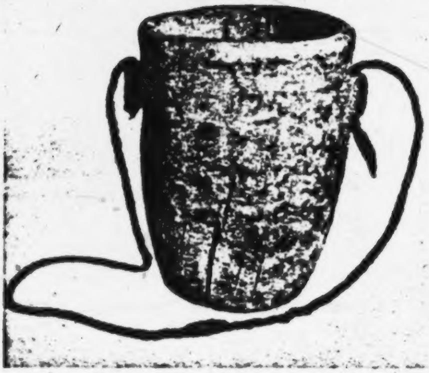

Fig. 176. Little mortar of the type known as *akabar*, or *takabart*. This type of mortar is used by pastoral Tuareg on their trading expeditions, and it is provided with a handle (*aɣaw*) of cord (goathair) for suspension. Ahaggar, manufactured by a blacksmith of Tamanɣaset, the *Afuh-en-tehlé* tribe. Dimension: 0.23 m high, 0.16 m in diameter at the rim. (F.M. 111).

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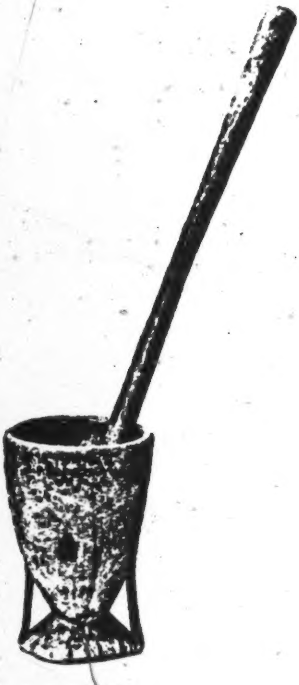

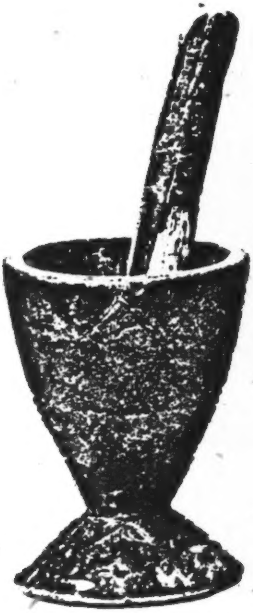

Fig. 177. The large millet mortar (*tindé*) with its heavy wooden pestle (*éheɣen*). It is used almost daily for pounding millet in the camps and it is used also to pound other cereals, dates, and even meat. Mortars of this type are manufactured in Southern Tuareg country by blacksmiths. The specimen depicted is made of wood from a tree growing in the Sudan and known to the Northern Tuareg as *twyla*. Introduced to Ahaggar from Zinder, the *Dag Ṛali* tribe. Dimension of the mortar: 0.445 m high, 0.299 m in diameter at the rim. Dimension of the pestle: 1.255 m long. N.M. G. 5224a–b.

Fig. 178. Little mortar (*tindé*) with a short wooden pestle (*éheɣen*). Manufactured from wood of *abseɣ* (*Acacia Raddiana*) by a blacksmith of Tamanṛaset. Ahaggar, *Ḫarratin* of Taṛhawhawt. Dimension of the mortar: 0.230–0.235 m high, 0.170–0.180 m in diameter at the rim. Dimension of the pestle: 0.350 m long. (N.M. G. 5838a–b).

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[P24]

It is called *ékanef* and is baked in the following manner:— The millet flour is mixed with juice of *tadent*-berries (i.e., berries of *Boscia senegalensis*) and also with certain medicines unknown to my informants who said they were of Sudanese origin. This mixture is made into a solid dough with a very small content of water, and is baked in the sand where it is covered with hot sand, ashes, and embers in the same way as the bread type known as *tugella* (*taġella* in the north).

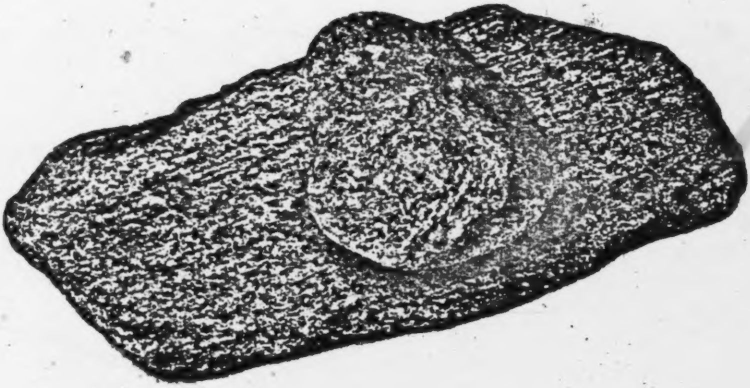

Fig. 179. Simple saddle quern (*tehunt*) of two natural stones: (a) the lower part called *tehunt*, (b) the upper part called *azzed*. It is used for grinding cereals. Ahaggar, the *Aġuh-en-tehlé* tribe. Dimension of the lower stone: 0.360 m long. Dimension of the upper stone: 0.115 m. (N.M. G. 5839a–b).

261 This *ékanef* bread is eaten exclusively by women who claim that it gives them a good appetite and makes them fat.

262 Millet porridge is a common dish among the Ahaggar Tuareg, and it constitutes by far the most
important vegetable dish to the Ayr Tuareg and the sedentary agriculturists of the south. Millet
252 porridge is known in Ahaggar as *esink*, in Ayr as *echink*. The preparation of millet porridge involves
much strenous work as follows:— (1) An amount of millet seeds is poured out into the large wooden
mortar (*tindé*, p. 235, fig. 177). A little water is added to the seeds which are then pounded for about
*[413] ten minutes. The seeds thus pounded are then poured out into a plaited bowl (*tabeyka*; Fig. 185) or
another receptacle to be winnowed. This process is done by shaking the plaited bowl itself, and by
pouring small quantities of the pounded seeds from the bowl into a plaited tray (*téseyt*; Fig. 184)
which is better fitted for winnowing by shaking. The husks or pods covering the seeds are thus taken
away by the wind. (2) When the pounded seeds have been cleaned or winnowed in this way they are
replaced in the wooden mortar, and water is again added. The seeds are now heavily pounded for
about half an hour, and most of them are turned into flour after this process, but a small amount of
seeds remains unpounded. The mixture of flour and unpounded seeds are poured out into the plaited

bowl and the plaited tray just described, and the flour is shaken into the large wooden bowl (*elkada*; 252
Fig. 195b) while the unpounded seeds remain in the plaited receptacles. (3) The small amount of seeds [415]*
which have not yet been turned into flour is put back into the mortar, a little water is again added, and pounding is resumed for five to ten minutes. Most seeds are now turned into flour which is placed in the wooden bowl by shaking the plaited receptacles. (4) The seeds which are not yet pounded after this treatment are replaced in the mortar to be pounded for two or three minutes without the addition of water. The flour produced is shaken into the wooden bowl. (5) What remains unpounded is replaced in the mortar to be pounded without water for two or three minutes, and the flour obtained is shaken into the wooden bowl. (6) The flour is put into the large cooking pot (*éγir*) which has been boiling with water during pounding. (7) An extremely small quantity of flour derived from a final pounding is added to the pot after cooking for about five minutes. (8) During cooking the porridge is stirred [412]
with a wooden stick known to the Ahaggar Tuareg as *aserwi* (Fig. 188).

Millet porridge (*esink*, or *echink*) is of heavy consistency and is normally eaten with milk by means 262
of spoons. But if milk is lacking or is scarce, the Tuareg also add various types of sauces such as the 252
following which is made by many Ayr Tuareg:—Leaves of certain plants (*abezey*, *Cassia tora*; *malokhiya*, [824]
Corchorus tridens; *kuka*, a large tree growing in the Sudan) or seeds of a plant known as *ékabewa* (*Corchorus olitorius*) are put into a large mortar to be pounded together with onions, dried tomatoes,

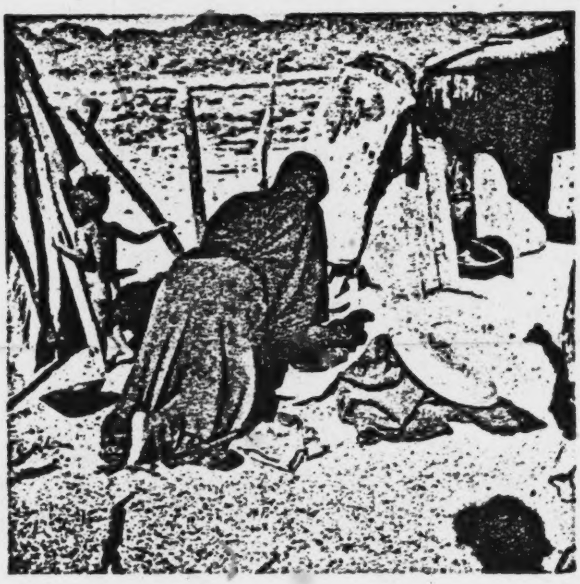

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Fig. 180. Tuareg woman grinding wheat on the simple saddle quern (*tehant*). The saddle quern is placed upon a piece of skin (leather) called *asentel* which receives the flour. Ahaggar, the *Dag Ṛali* tribe.

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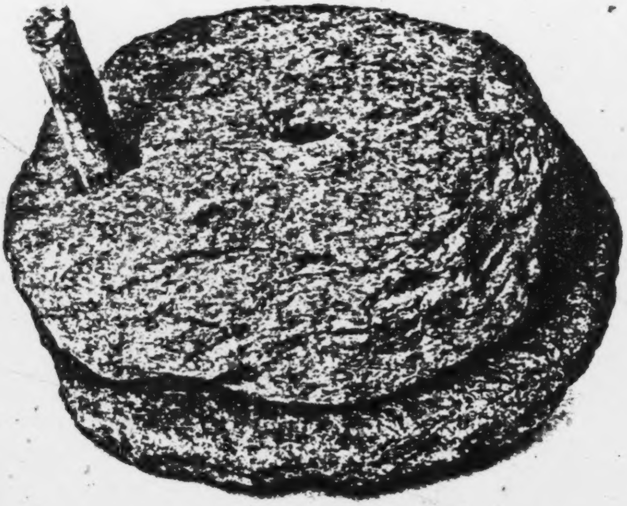

Fig. 181. A hand-mill (*tasirt*) manufactured by blacksmith of Tamanṛaset and used at that village by *Ahl Azzi* Arabs. Dimension: 0.52 m in diameter (upper stone), 0.32 m in diameter (lower stone). (N.M. G. 5840a–b).

262
252 and red pepper which is much esteemed by the Tuareg, but not always available. The pounded flour of these vegetables is boiled with water and butter and thus turned into a kind of thick sauce which is poured out over the porridge to be eaten.

The porridge type known as *esink* or *echink* can be made from other seeds besides millet. Porridge made from barley, which is then also pounded in the mortar, is highly esteemed by the Tuareg who also use various wild seeds and roots for this dish. Plants utilized for porridge are mentioned above in the description of collecting (p. 175 ff.). Porridge is also made from dried dates pounded in the millet mortar; this dish is common among the Northern Tuareg.

The Tuareg have a particular type of porridge which I have never tasted. It is known to the Ayr Tuareg as *baṛela*, and is made from pounded seeds of various cultivated plants (wheat, barley, maize, or millet). The seeds are pounded in the mortar but their husks or pods are not removed by winnowing. Otherwise the preparation of this dish is similar to that of ordinary porridge.

262
846 The Ahaggar Tuareg distinguish between very thick porridge called *tarawayt* and very thin porridge or thick gruel known as *aliwa*. The latter dish is known to the Ayr Tuareg by the same name, and

among them it is eaten in particular by women during the first seven days after the birth of a child, 262
that is during the period from birth to the name-giving ceremony known as *isnawen*. It is considered 846
dangerous for a woman to eat too much vegetable food during this period, while meat is believed to
make her recover quickly after birth. The same diet is followed by young boys after their circumcision 262
until their wounds have healed. These dietetic rules no doubt have their root in magical beliefs. 304

All Tuareg esteem liquid or semi-liquid dishes which are consumed mainly during the very hot 262
season. A very common dish of this type is that named *aṛejira* (Ayr) or *aṛehara* (Ahaggar). It is made
from flour of millet, sorghum, dates, and crushed cheese mixed with water, the main substance being
pounded millet. The dish is served in a large wooden bowl or in a calabash, and is eaten and drunk [412]
by means of a large wooden ladle called *tamulat* (Fig. 194a–b). This liquid dish is a substitute for [251]
milk during the hot season when milk is scarce, and it is frequently used for food on journeys, in which
case it is transported in the form of dough-like balls to be dissolved in water just before eating.

The terms *aṛejira* and *aṛehara* are used for various liquid or semi-liquid dishes, or beverages, for
which the Tuareg have particular names according to their composition. Dates are less important
for liquid dishes in Ayr than among the Northern Tuareg to whom dates form an important part of
food. Very important in the north is a dish known as *talekessat*; it is made from dried dates pounded [252]

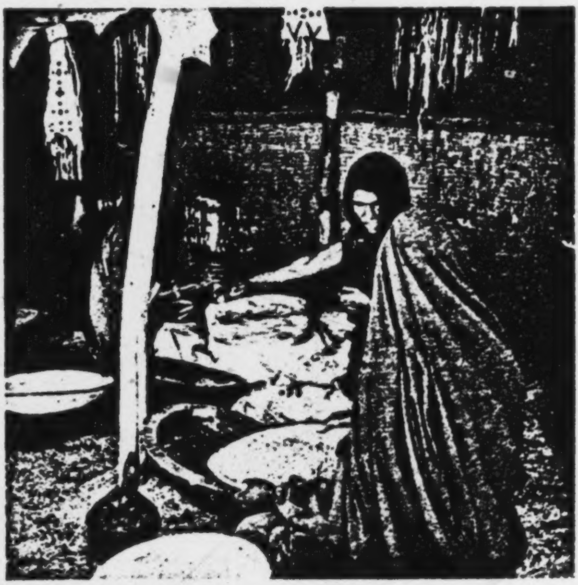

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Fig. 182. Tuareg women turning a hand-mill (*tasirt*). In the foreground a woman shaking flour into a wooden bowl. Note the ornamented patches of leather hanging down from the tent sheet. Ahaggar, the *Dag Ṛali* tribe.

[text continues on p. 247]

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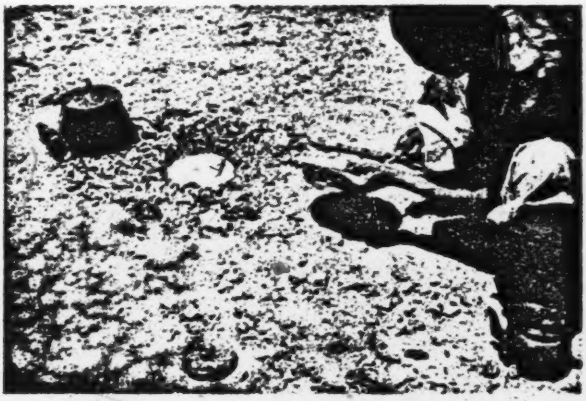

Fig. 183. Baking a *tajella* bread. The gruel-dough before it is covered with sand, ashes, and embers. Ahaggar, *Ahl Azzi* Arabs.

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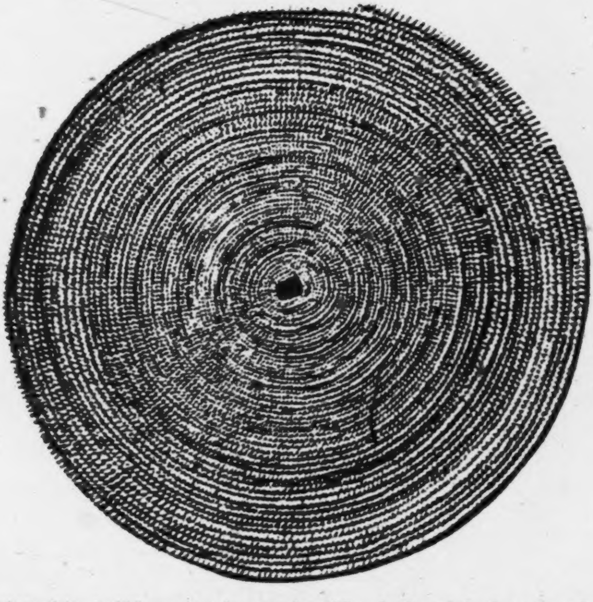

Fig. 184. Plaited tray (*téseyt*) which serves to winnow grain and flour but is used also for a cover of milk-bowls and eating bowls. Made according to the technique of coiled basketry by Tuareg woman. The plaiting material is straw of *talreggit* (*Juncus maritimus*). Ahaggar, the *Aguh-en-tehlé* tribe. Dimension: 0.333–0.343 m in diameter. (N.M. G. 5824).

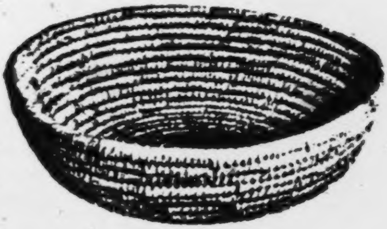

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Fig. 185. Tray or bowl ,*tabeyka* - perhaps not correctly spelled). It is used for winnowing, and it serves as an eating bowl and a drinking bowl as this container is watertight. Coiled basketry of date palm leaves (*agum*). Made by Tuareg woman. Ahaggar, the *Dag Ǥali* tribe. Dimension: 0.285 m in diameter. (F.M. 263).

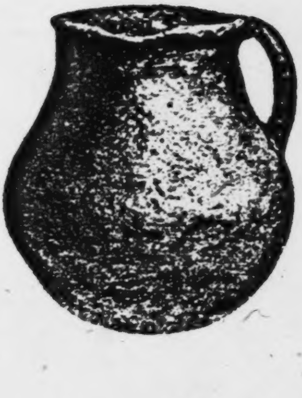

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Fig. 186. Pot (*talekkint*) with a single handle. Manufactured by *Ḫarratin* women in Ahaggar, the *Aǥuh-en-tehlé* tribe. Dimension: 0.18 m high. (F.M. 172).

in a mortar with a little water to a soft dough to which a little cheese, butter, or milk is added before 262
eating. If a large quantity of milk is added this dish is known as *tarkit*. The Ahaggar Tuareg, as men- 252
tioned (p. 167), also pound dried dates with locusts to make a dish eaten by women who wish to grow fat. [261]

The Arabs and the Arabic-speaking agriculturists of Tidikelt (the *Ḫarratin*) have introduced among 262
the Northern Tuareg the well-known North African dish generally called kuskus. The dish is known [172]
to the Tuareg as *keskesu* which is also Arabic by origin. But this dish is not the staple diet among [171]
the Northern Tuareg that it is among the Arabs and the Berbers of the Atlas. It is eaten mainly on festive occasions, and there are many Tuareg women who even to-day do not know how to prepare it.
The *keskesu* dish is preferably made from wheat flour, though barley flour may also be used. The 252
cereals are ground with hand-mills or quern stones (saddle querns), and the flour is rolled into very

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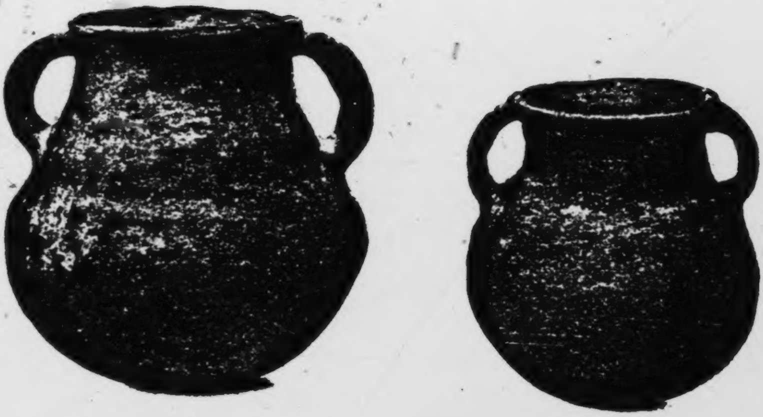

Fig. 187a–b. Earthen cooking pots manufactured by *Ḥarratin* women in Ahaggar.
a. Pot (*téṛirt*). Ahaggar, *Ahl Azzi* Arabs of Tamanṛaset. Dimension: 0.210 m high. (N.M. G. 5841).
b. Pot (*alekkin*). Ahaggar, *Ḥarratin* of Taṛhawhawt. Dimension: 0.174 m high. (N.M. G. 5204).

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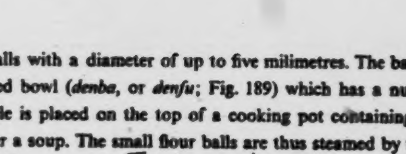
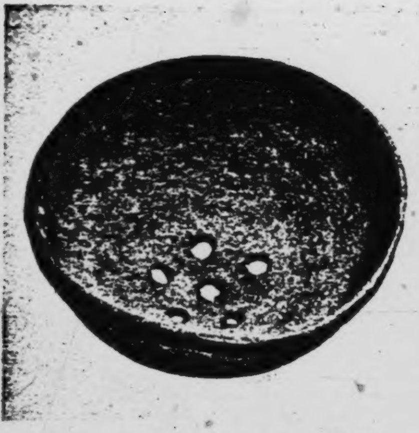


Fig. 188a–b. Simple ladles of the *aserwi* type used for stirring millet porridge. Made by Tuareg women from wood of *abseṛ* (*Acacia Raddiana*).
a. Ahaggar, the *Aḡuh-en-tehlé* tribe. Dimension: 0.382 m long. (N.M. G. 5211).
b. Ahaggar, the *Iheyawen Hoda* tribe. Dimension: 0.415 m long. (N.M. G. 5846).

*252 [415] small balls with a diameter of up to five milimetres. The balls are put into a special earthen, wooden, or plaited bowl (*denba*, or *denfu*; Fig. 189) which has a number of small holes in the bottom. This receptacle is placed on the top of a cooking pot containing meat and/or vegetables to be boiled in water for a soup. The small flour balls are thus steamed by the boiling soup in the cooking pot. Like

[text continues on p. 250]



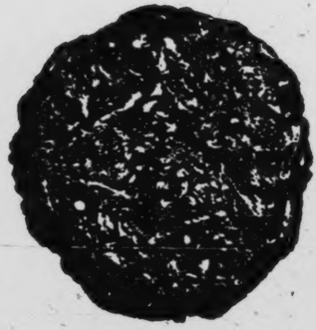


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Fig. 189. Earthen jar (*denfu*, or *denba*) of the particular type used for the preparation of *keskesu*. Ahaggar, *Ḥarratin* of Tamanṛaset. Dimension: 0.16 m high, 0.30 m in diameter. (F.M. 215).

Fig. 190. A kind of cake (*serfat*) made of onions and dates which are mixed and pressed. Such cakes are made in Tidikelt but are sold at Tamanṛaset by Arab merchants. They are pounded in the mortar or are crushed between two stones before cooking. Dimension: 0.10 m. (N.M. G. 5847a).

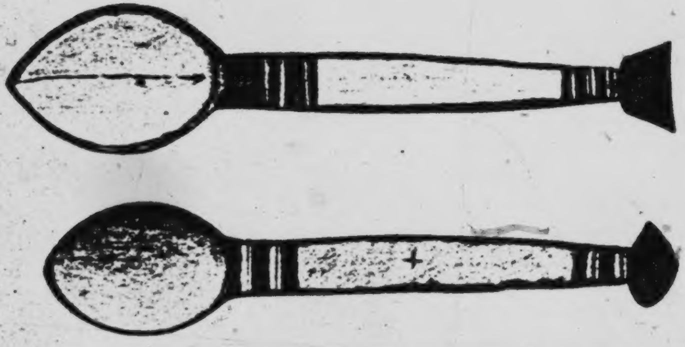

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Fig. 191. Wooden spoons (*tesukalt*, pl. *tisukalin*) cut by blacksmiths from wood of the *taboraḳ* tree (*Balanites aegyptiaca*). Ahaggar, the *Ağuh-en-tehlé* and the *Dag Ṛali* tribes. Dimension: ca. 0.26–0.28 m. (F.M.).

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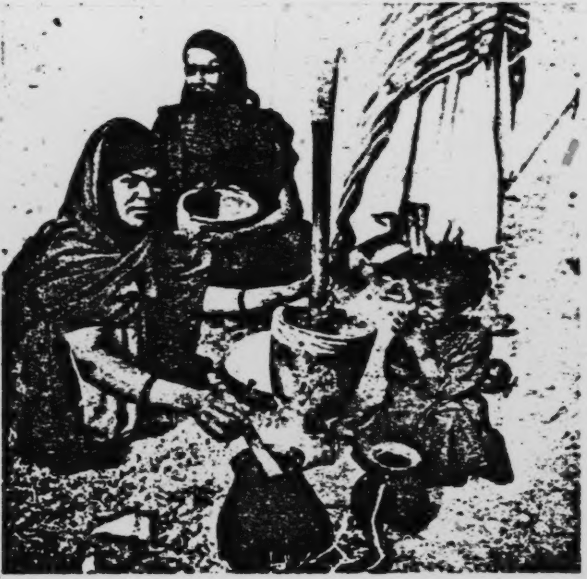

Fig. 192. Tuareg woman cooking millet porridge. Ahaggar, the *Agah-en-tehlé* tribe. The cooking pots seen on this photograph are bought in the Sudan on trading expeditions. Sudanese pots are superior to those made in Ahaggar.

Like
264 most Tuareg dishes they are eaten from a large wooden bowl. If meat is cooked with the soup it may
be broken into small pieces to be eaten with the balls, but part of the meat cooked is always eaten
separately. The Tuareg eat *keskesu* with spoons, but if spoons are lacking they also eat it with the
262 hand, as do the Arabs. In addition to *keskesu* with its small balls which resemble grains of rice, the
Northern Tuareg have another dish prepared in the same way but with larger balls. It is termed
[289] *tikhemmezin* and is considered inferior to the *keskesu*. – Both these dishes are unknown to the Ayr
Tuareg of the *Kel Ferwan* group.

262 Two particular dishes are mentioned from Ahaggar by Foucauld. One of them is called *ibergan*
252 and consists of unripe barley boiled in its own juice without water. The other one is known as *abezbez*
[267] and is made from tender plants of wheat and barley which are dried and pounded or ground into
powder, to be eaten, boiled or unboiled, in periods of famine (Foucauld 1951–52, I, p. 89, 118).

Tuareg vegetable dishes are frequently prepared in a very simple way. Thus there is a dish known as *twes* (Ahaggar) or *tewes* (Ayr) which consists of entire seeds of millet or sorghum boiled in water. It is eaten mainly by children who frequently walk about the camp eating these boiled grains from their hands.

252 It is clear from the description of vegetable dishes that the cooking pot plays an important role for
*415 food preparation, and all dishes prepared in this way, including cooked meat, are known to the Tuareg

as *téyint* (Ayr) or *talekkint* (Ahaggar). But pastoral Tuareg do not make eartenware pots themselves. 252
They obtain them from sedentary people, and it is possible that vegetable dishes have been prepared 415*
with hot stones up to recent times, for Foucauld states that hot stones are occasionally used for various [323]
vegetable dishes in Ahaggar (Foucauld 1951–52, IV, p. 1583). However, I have not been able to
confirm this during my own investigations among the Tuareg. It should be added that certain vegetable 252
dishes are neither boiled nor baked. This is the case with seeds and roots of various wild plants which
are ground and pounded into flour to be eaten without further preparation. Such dishes are known
to the Tuareg as *tébik* (Ahaggar) or *téderka* (Ayr). Seeds and roots of wild plants utilized in this way
have been mentioned in the chapter on collecting p. 175 ff.

The Tuareg have a great many different dishes, but in spite of this variety they do not always change 262
their food from one day to another. They frequently live on the same type of food for extremely long periods. They may live almost exclusively on milk for weeks and even months, and if milk is not available they live so to speak exclusively on vegetable dishes, which may also not be changed for very long periods.

The Ahaggar Tuareg have three meals a day:— (1) *taġimġimt* which is a light meal taken in the 264
morning. (2) *amekli* which is a prepared meal (e.g., bread, porridge, or *areḥara*) eaten at midday. (3) *ameġin* which is the evening meal, also known as *amensi*, or *aẓuẓeġ*. It is the most important meal.

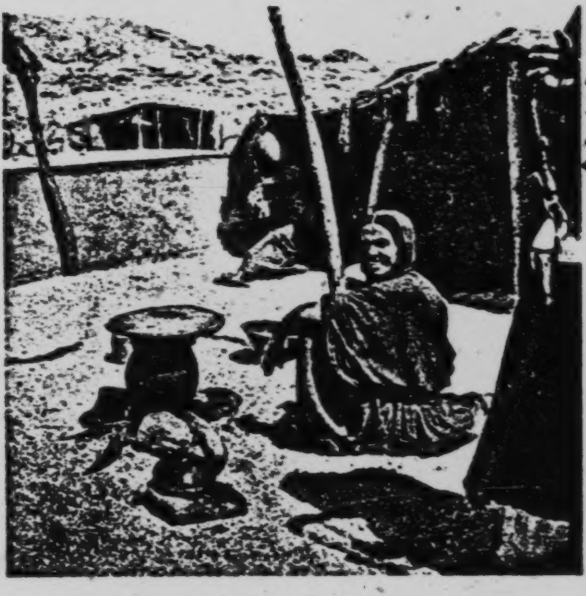

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Fig. 193. Tuareg woman cooking kuskus (*keskesu*) in an European enamelled pot. Ahaggar, the *Dag Ġali* tribe.

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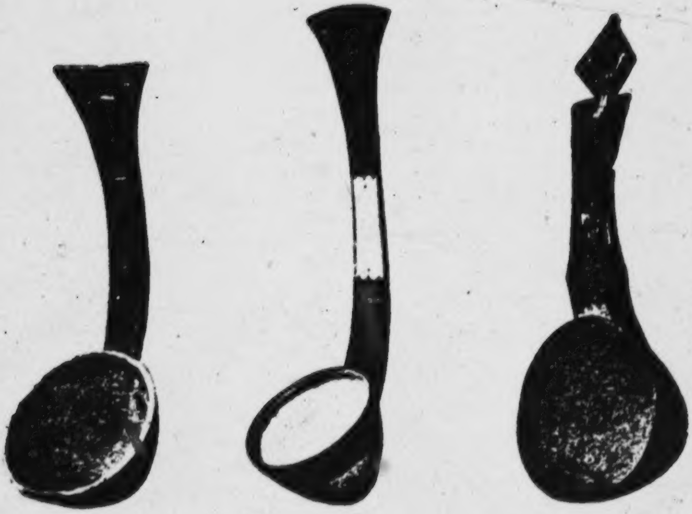

Fig. 194a–c. Bowl-like ladles from Ahaggar and Ayr. They are used mainly for eating liquid dishes – in particular for the dish known as *aṛehara* (Ahaggar) or *aṛejira* (Ayr).

a. Ladle (*tamulat*) cut by blacksmith from wood of the *tabaraḳ* tree (*Balanites aegyptiaca*). Ahaggar, blacksmiths of Abalessa. Dimension: 0.285 m long, 0.110–0.120 m in diameter (the bowl). (N.M. G. 5845).

b. Ladle (*tamulat*). Ayr, Agadez. Dimension: 0.330 m long. (N.M. G. 6631).

c. Ladle-like bowl (*assar*) cut by blacksmith from wood of the *tabaraḳ* tree (*Balanites aegyptiaca*). Ahaggar, *Ahl Azzi* Arabs of Tamanṛaset. This ladle-like bowl was not used for food but for conservation of fine-grained sand used for hair-dressing together with water and butter. Dimension: 0.330 m long, 0.120 m in diameter (the bowl). (N.M. G. 5879). [302]

264 frequently consisting of bread or porridge eaten rather late at night. The Ayr Tuareg have related terms for their meals:— (1) *tegimgimt* which is a prepared meal eaten late in the morning. (2) *támekkelewt* which is the prepared meal taken at midday. (3) *temegint*, late evening meal which is the main [272] meal in Ayr, as in Ahaggar. In addition to these meals there is a very light meal taken with tea immidiately after rising. It is known as *elfetur*.

[511] Incidentally there are Tuareg who do not have food enough to eat three times a day.

During times when Tuareg subsist exclusively on milk they have no regular meals. The amount [184] of milk needed to support life is very great, and it is drunk slowly during the day. On extensive journeys when the camels cross the barren deserts, the Tuareg also do not have regular meals as they do in their camps.

[text continues on p 255]

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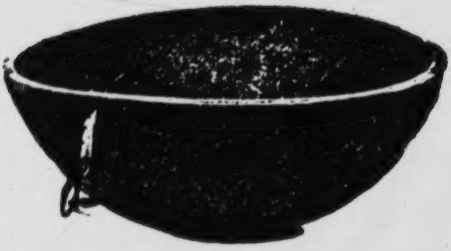

Fig. 195a. Wooden eating bowl (*tayrehent*) made by Ayr blacksmith. Ahaggar, the *Ajuh-en-tehle* tribe. Dimension: 0.095 m high, 0.253 m in diameter. (N.M. G. 5212).

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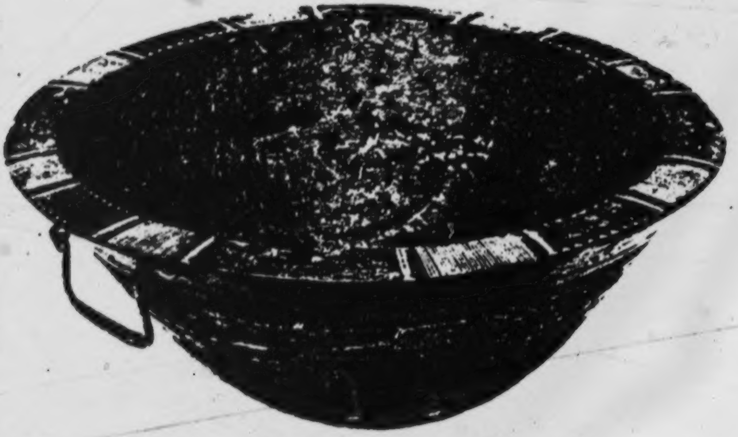

Fig. 195b. Wooden eating bowl (*alkade*) manufactured by blacksmith from wood of the *teyle* tree and provided with an iron handle. Ayr, blacksmiths of Damergu. Dimension: 0.43 m in diameter. (N.M. G. 6632).

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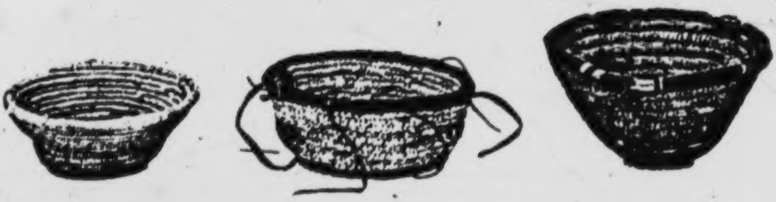

Fig. 196a–c. Plaited bowls in coiled technique. They serve as eating bowls for little children and are known as *tafaḳemt* (pl. *tifokam*).

a. Plaited from straw of *taleggit* (*Juncus maritimus*) by Tuareg woman. Ahaggar, the *Aǧuh-en-tehlé* tribe. Dimension: 0.036 m high, 0.100 m in diameter. (N.M. G. 5215).
b. Plaited from straw of *taleggit* (*Juncus maritimus*) by Tuareg woman. Ahaggar, the *Dag Ṛali* tribe. Dimension: 0.043 m high, 0.102 m in diameter. (N.M. G. 5214).
c. Plaited from straw by Tuareg woman. Ahaggar, the *Aǧuh-en-tehlé* tribe. Dimension: 0.105 m in diameter. (N.M. G. 5844).

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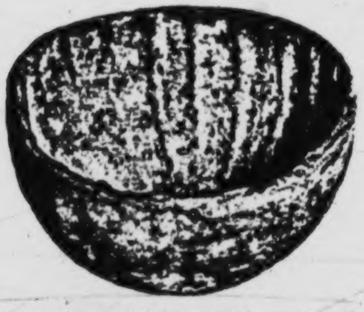

Fig. 197. Small calabash (*tafakemt*) which serves as eating bowl for little children. Ahaggar, the *Aǧuh-en-tehlé* tribe. Dimension: 0.055 m high, 0.095 m in diameter. (F.M. 145).

Crafts

Tuareg crafts clearly disclose traits belonging to distinct cultural levels. This may be seen from a 372
brief description of the methods of fire-making. [174]

Matches are in ordinary use nowadays, but they are used economically not only because they cost [139]
money but also because many Tuareg live far away from towns or trading posts where matches can
be obtained. The embers of a fire smoulder for a very long time, and when the Tuareg want to light
a fire they normally find embers under the ashes where their fire has been. Glowing wood is carried
from one tent to another on a fragment of calabashes or earthen pots, and some Tuareg even take
fire with them in this way during nomadic migrations. If a new fire has to be lit and matches are not
available, most Tuareg use the well-known method of fire-making by means of flint and steel. This [171]
method is widely resorted to in Northern Africa even to-day, and is practised among the Tuareg of
Ahaggar as follows:— The curved piece of steel (*énefed*) is placed over the three middle fingers of the
right hand. It is struck against a small piece of flint (*tafarast*) held between the first and second fingers
of the left hand together with a small piece of lighting material which may be a small piece of cotton
cloth. However, the best lighting material (*taljert*) is a piece of wood of *tefé'ryast* (*Echinops Bovei*), [324]
which has been boiled and thereupon beaten into a fibrous mass with a stone. The Tuareg keep this [415]
lighting material in a particular leather bag (*tarallaht*) together with the steel and one or two pieces
of flint (Fig. 198). Lighting material according to Maire is also made from a plant named *térahit* [324]
(*Traganum nudatum*) (Maire 1933, p. 82). The spark produced by striking the steel against the flint
causes the lighting material to glow, and after blowing on it or swinging it in the air, it is placed under
a small bunch of hay which burst into flame after further heavy blowing. The use of flint and steel
is not a very difficult method of fire-making, and I have used it myself on journeys when matches
had come to an end.

The Tuareg do not generally use more primitive methods of fire-making nowadays. But they know [324]
an ancient method of making fire by rubbing a piece of hard wood (*agar* in Ahaggar, *agar* in Ayr;
Maerua crassifolia) against a piece of soft wood (*turha* in Ahaggar, *turza* in Ayr; *Calotropis procera*).
By this process they produce by hand rubbing a glowing dust which is brought into flame by means
of lighting material and hay as described above. One of my informants among the Ayr Tuareg had
produced fire according to this method. Lhote states that the method is at times used by the Tuareg
of Ahaggar, where the hard ribs of date palm leaves are also used for starting a fire by rubbing (Lhote
1955a, p. 258).

Stone materials play a very little part in Tuareg crafts. Natural stones are used occasionally as 412
[p.255] [324]

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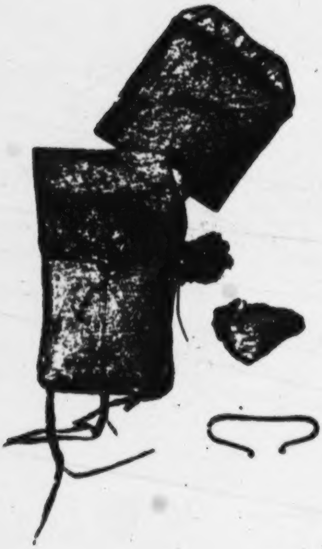

Fig. 198. Flint (*tafarast*), steel (*énefed*), and lighting material (*tajjert*). The lighting material, which is conserved in a leather bag (*taṛallabt*), is made from wood of *tefdryast* (*Echinops Bovei*). Ahaggar, the *Ağuh-en-tehlé* tribe. Dimension of the steel 0.065 m long. (F.M. 154a–d).

412 tools, e.g., for hammering tent pegs into the ground, for rope making as described below, for separating the hide from the body when skinning a barbary sheep, and for crushing rock-salt, red pebber, dried tomatoes, tobacco, and the like. We have seen above that the Tuareg saddle querns used for grinding cereals are natural stones of a particular form and size, and that they are used for grinding without any particular fashioning, though sometimes treated with a hard stone or a piece of iron to make the grinding surface more rugged and effective. The handmill is never manufactured by pastoral Tuareg (cf. p. 214 ff., Figs. 179–182). [324]

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Prehistoric quern stones and stone pestles are found in many regions of the Central Sahara and these ancient implements, I was told, are sometimes used by the Tuareg of Ahaggar for grinding and pounding (Fig. 200). The Tuareg also use the numerous neolithic stone axes (Fig. 199) as whetstones for iron knives. These axes are known to the Ahaggar Tuareg as *taḍeft n eğenna*, that is "the axe of the rain (or the thunder)", and all Tuareg believe that they have fallen from the sky during heavy storms.

301 Stone material is still used for certain Tuareg ornaments, and notably for the well-known arm-ring (*ahbeğ* in Ahaggar, *éweki* in Ayr) which is worn by most adult men and also by some boys. These rings are sometimes mentioned in literature as a weapon, but they are not well fitted for this owing to their fragility. Most arm-rings are made from soft stone such as serpentine, and are manufactured [564]
by blacksmiths (Ineḍen).

by blacksmiths (*Ineḍen*). Tuareg women wear certain stone ornaments which derive from prehistoric 301
finds or are introduced from other countries. But in Ahaggar I have collected one stone ornament, 301
or rather an amulet, which was said to have been manufactured by a Tuareg woman of the vassal 761
class. This stone amulet (*ameṛwan*) (Fig. 201) may be described as a large bead or button pierced in [365]
the middle for the insertion of a leather strap. It is said to be used as an amulet against diseases of
little children, who are also very fond of looking at the red-white stone material from which the amulet
button is made. The hole for the little carrying strap is made by means of an awl known as *éndel* [412]
(Fig. 218b, p. 278). This stone amulet has been described elsewhere together with certain other stone [114]
ornaments used among the Ahaggar Tuareg (cf. Nicolaisen 1961, Fig. 6a–l p. 128 f., p. 139 f.).

Earthen pots are widely used by pastoral Tuareg even nowadays, though European metal vessels 415*
are available at the principal trading centres. They are particularly common in Ahaggar where the [484]
Tuareg take their earthen pots with them on donkey's back during nomadic migrations – the old
belief that pottery does not go with the roaming life of pastoralists is contrary to fact. However, metal [177]
vessels are, of course, more durable and will no doubt in a few years replace the earthen pots which
are not manufactured by pastoral Tuareg. The Ahaggar Tuareg acquire their pots from the cultivation 323
centres where there are a few women who practise the art of pottery making. There are various types of [462]
pots (cf. Figs. 186, 187a–b) which are made from black clay (*talaḳ*). The lowermost part of all pots is
formed over the bottom of an old pot on which is placed a piece of moistened cotton in order that the
clay shall not stick. The upper part of the pots is built up with the hands according to the well-known
technique of the application of thin sausage-like strips of clay. This technique is also used for the
manufacture of other containers such as earthen milk-bowls (*akus*) (Fig. 21a), incense jars (*elbakhkhar*)
(Fig. 203), and drums (*akralal*, *abakar*) (Fig. 202a–b). These latter types of pottery are not in general [184]
use among pastoral Tuareg but are common among sedentary agriculturists. The pottery made in

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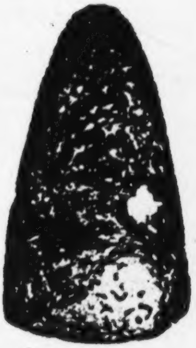

Fig. 199. Neolithic stone axe known to the Tuareg as *tasileft n efenna*. Used as whetstone for iron knives. Ahaggar, the *Aguh-en-tehle* tribe. Dimension: 0.10 m long. (F.M. 109).

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Fig. 200. Neolithic stone pestle. From Olufsen's collection. The Tuareg of Ahaggar say that these pestles were made by the ancient *Isebeten* people. Dimension: 0.81 m long, 0.045–0.050 m in diameter. (N.M. G. 1.46).

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Fig. 201. A stone amulet (*amerwan*) made by a Tuareg woman of a brown and white stone like that depicted. Ahaggar, the *Aguh-en-tehlé* tribe. Dimension of the amulet: 0.025 m in diameter. (F.M. 176).

323 [531] The pottery made in Ahaggar is plain and usually without any kind of ornamentation. But I have brought home from Abalessa a piece of a pot decorated with pricks in much the same way as are the prehistoric potsherds frequently found in caves in the Ahaggar Mountains. The pot in question was made by a woman from Abalessa. The pots to be burned are covered with wood, and small pieces of wood are also placed within them. Burning takes place in the evening when there is not too much wind, and the pots are removed next morning. After burning, the pots assume a red colour, but all pots that have [114] been used over the fire for some time become black. I have myself never attended the manufacturing [113] of pottery in Ahaggar, and readers are referred to a study by Lhote for more detailed information [437] (Lhote 1947b, p. 145–154). Pastoral Tuareg of Ahaggar acquire most of their earthen pots from sedentary agriculturists of their own country, but they also buy some pots of superior quality during trading expeditions to the Sudan (Fig. 192).

[462] In Ayr, pottery is manufactured by sedentary women of Agadez and probably also by women of the sedentary *Kel Ewey* of certain Ayr villages. No true pastoralists seem to make pots, which in Ayr are manufactured according to techniques related to those from Ahaggar (cf. Lhote 1950c, p. 507–512).

[Text continues on p. 260]

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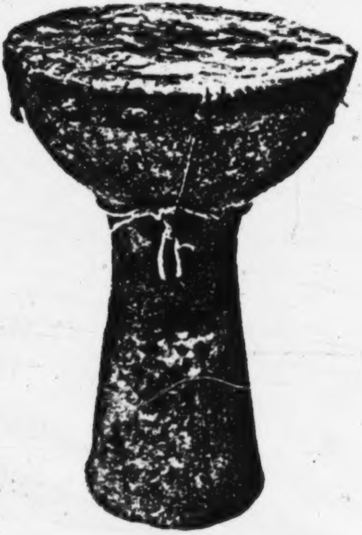
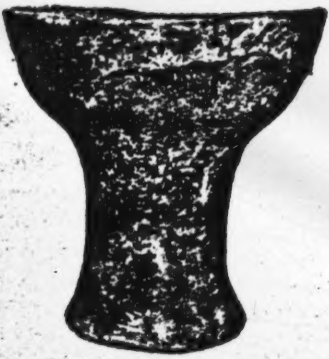


Fig. 202a–b. Two ceramic drums of a type used by sedentary agriculturists in Ahaggar.

a. Large drum (*ekrelel*). Made by woman of the *Ḥarratin* at Abalessa. Dimension: 0.450 m high, 0.310–0.325 m in diameter at the top. (N.M. G. 3907).



b. Little drum (*abakar*). Made by woman of the *Ḥarratin* at Tamanrasset. Dimension: 0.25 m high, 0.25 m in diameter at the top. (F.M. 286).

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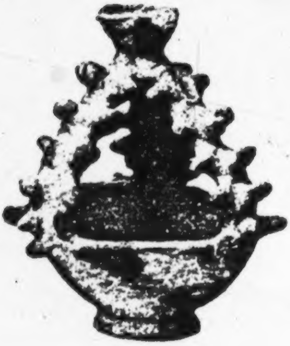

Fig. 203. Earthen incense jar (*elbakhkhar*). Ahaggar, *Ḥarratin* at Abalessa. Dimension: 0.179 m high. (N.M. G. 5889).

323 512). Most pastoral Tuareg of Ayr get their pots from Agadez, but pots are also imported from the
[437] south where they are of superior quality. These pots are said to be manufactured by black-skinned
323 *Igdalen* Tuareg (cf. p. 432) of the southlands, notably by people of the *Ikenawen* class which comprises
563 professional pot-makers. These people are not found among the *Kel Ayr* but are common in camps
[177] of the *Kel Geres* where I have met them. They speak *tamachek* but also have their own language
323 which is said to be related to *Sonray*. The pots made by these southern people are painted and decorated
531 (cf. Fig. 205) in contrast to those of Agadez which are plain and of very simple forms (Figs.
204a–b). So far as I am aware painted and decorated pottery is rarely manufactured in Ayr nowadays.
But Rodd states that such pottery in the form of pitchers with a blue design is made near Agadez
(Rodd 1926a, p. 160 f., pl. 22 p. 209), and when I investigated ruins of stone houses at Iferwan I found
a great many sherds of finely-decorated painted pots which must have been used up to the end of the
[178] great Tuareg revolt in 1917 when these houses were destroyed by the French. Lhote has also mentioned
the decline of pottery techniques in Ayr, and he states that, apart from little incense jars, no painted
and decorated pots are manufactured at Agadez nowadays (Lhote 1950c, p. 511).

*415 Certain metal receptacles were known to the Tuareg long before the European occupation, notably
[439] a cooking pot (*éṛir*) made from copper, and the flat drinking bowl (*tamennast*) made from tinned
copper or brass in Tripolitania, or in Tunisia. Metal receptacles are also manufactured by native
[326] blacksmiths in Tuareg country, e.g., the pail (*éṛir*) to be used for liquid butter (Fig. 164).

322 The blacksmiths are excellent wood-workers and make most wooden domestic utensils used by
[564] pastoral Tuareg (Figs. 21b, 37, 38, 58, 60, 61, 62, 63a–b, 75, 150, 153–154, 166, 176, 177, 178, 191,
[412] 194, 195, 212a, 219a–b, 285). The main implements for wood working are axes and adzes (Figs.
206a-d).

206a–d). The ordinary axe (*taḍeft*) is used by all Tuareg who may also possess small adzes (*tar-* 322
tawt), used mainly by women for the manufacturing of domestic implements such as spoons and 412
milking bowls. These implements manufactured by Tuareg women are generally inferior in quality 462
to those made by the blacksmiths, though certain noble women of the *Kel Ṛela* tribe make wooden
milking bowls that are said to be superior to those of the blacksmiths. In Ayr, Tuareg women
engage very little in wood-working, and the Ayr Tuareg are on the whole less skilled in crafts than
are the Tuareg of Ahaggar.

Pastoral Tuareg are experts in rope making. Ropes made from various materials play an important 283
part for the Tuareg for hobbling domestic animals, for fastening burdens transported on camels, as
reins, for the erection of tents, and for a great many other purposes. Incidentally the Tuareg make
substitutes for ropes in a very simple way. Thus if a man comes upon a camel which he wishes to take [824]
back to camp and has no rope or rein to lead it by he makes a lead from three or four pieces of palm
leaf, or the like, attached to each other. It is stated by Maire that the Ahaggar Tuareg make simple

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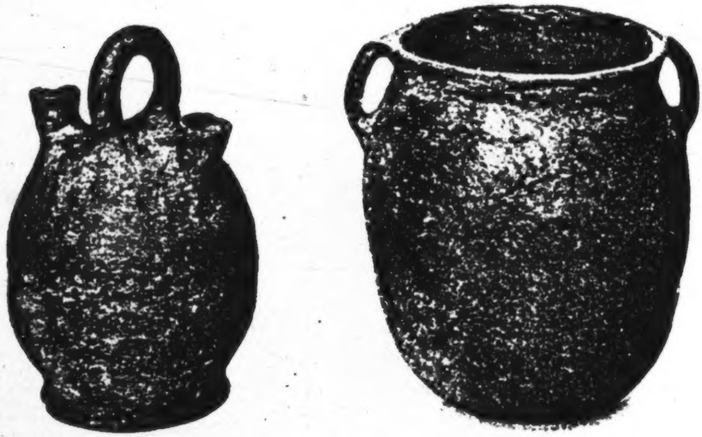

Fig. 204a–b. Earthen pots made by the sedentary *Imeggedezen* of Agadez.

a. A water jar with two spouts. It is known to the Ayr Tuareg and the Hausa-speaking *Imeggedezen* as *geigeleti*. It is used by the latter people but never by pastoral Tuareg. Dimension: 0.30 m high. (N.M. G. 6635).

b. Earthen jar used for water and also for cooking. It is known to the Ayr Tuareg as *téyint* or *étekin*, to the Hausa-speaking *Imeggedezen* as *tukunya* or *tulu*. Dimension: 0.285 m high. (N.M. G. 6634).

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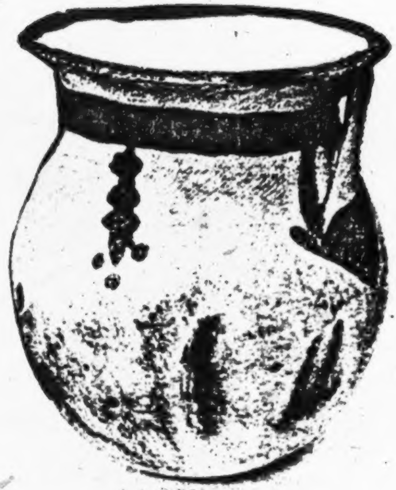

Fig. 205. Painted earthen pot (*tékanawt*) manufactured by the professional potmakers called *Ikenawen*. Ayr, Agadez. Dimension: 0.32 m high. (N.M. G. 6636).

283 824 hobble ropes from straws of the *tullult* grass (*Aristida pungens*) (Maire 1933, p. 62). For the manufacture of proper ropes the Tuareg may employ the bark of trees. Both in Ahaggar and in Ayr they use the bark of *Acacia Raddiana* (*abseṛ* in Ahaggar, *afagag* in Ayr) for this purpose (Fig. 113). These ropes are made after much the same method as that used for the Ahaggar ropes of date palm bast (*asan*) 283 462 and those of dum palm leaves made in Ayr. Ropes of this kind are always made by men, who, when making ropes from date palm bast, proceed in the following way:— Pieces of bast are soaked in water contained in a receptacle. They are thereupon torn into small strips about 20–30 cms long. These strips are rolled and twisted between the hands, and are kept in this rolled position under the foot until sufficient numbers of strips are available for the rope to be made. The ends of two rolled strips are then placed between the first and the second toes, and the strips are twisted together between the hands. New strips are added and twisted in this fashion until a suitable length of two twisted rows of strips has been made. This length is thereupon stretched over one of the feet, doubled, and twisted between the hands. It is finally hammered with a stone while resting on another stone or upon the bottom of a large mortar which is frequently used for support. The Ahaggar Tuareg make their hobble ropes in this way (Fig. 207), and the Ayr Tuareg apply the same technique to ropes made from strips of dum palm leaves which are also soaked in water before twisting. Both in Ahaggar and in Ayr this method may also be used for the manufacture of leather cords (Figs. 43, 73a).

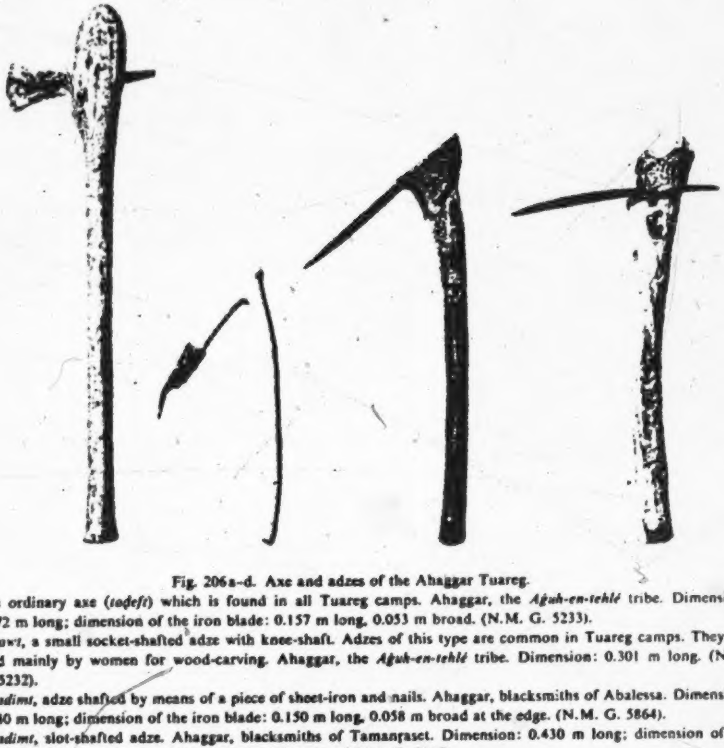

Fig. 206a–d. Axe and adzes of the Ahaggar Tuareg.

a. The ordinary axe (*todeft*) which is found in all Tuareg camps. Ahaggar, the *Aǧuh-en-tehlé* tribe. Dimension: 0.572 m long; dimension of the iron blade: 0.157 m long, 0.053 m broad. (N.M. G. 5233).

b. *tattawt*, a small socket-shafted adze with knee-shaft. Adzes of this type are common in Tuareg camps. They are used mainly by women for wood-carving. Ahaggar, the *Aǧuh-en-tehlé* tribe. Dimension: 0.301 m long. (N.M. G. 5232). [322]

c. *tékadimt*, adze shafted by means of a piece of sheet-iron and nails. Ahaggar, blacksmiths of Abalessa. Dimension: 0.440 m long; dimension of the iron blade: 0.150 m long, 0.058 m broad at the edge. (N.M. G. 5864).

d. *tékadimt*, slot-shafted adze. Ahaggar, blacksmiths of Tamanrasset. Dimension: 0.430 m long; dimension of the iron blade: 0.222 m long, 0.065 m broad at the edge. (N.M. G. 5865). [564]

The axe and the adzes are all made by blacksmiths.

The very best ropes or cords manufactured by the Ahaggar Tuareg are those made from goat's 283
hair which is sheared with a knife by the women once a year in the hot season. These ropes are known [237]
to the Ahaggar Tuareg as *ihellumen* (sing. *ahellum*), while the proper term for a rope of goat's hair [233]
in Ayr is *azaw*. But the Ayr Tuareg do not make such ropes as they have goats of the short-haired
breed (p. 33). They obtain their ropes from the Ahaggar Tuareg. Ropes of goat hair are manufactured [438]
by women by the following method:— The mass of hair, known as *éhafilen*, is placed upon a piece [462]
of skin and is prevented from blowing away by means of a stone. The hair is then taken out in small
quantities with the first and second fingers of the left hand to be spun upon a stick 30–40 cms long.

[text continues on p. 266]

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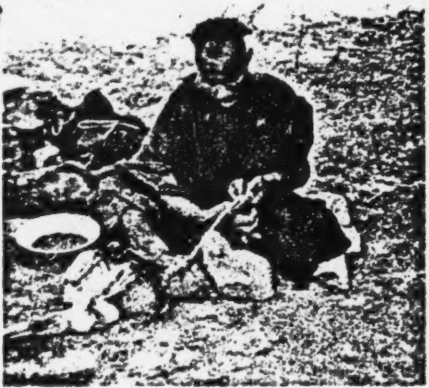

Fig. 207. Tuareg making a hobble-rope (*téffart*) of date palm bast (*asan*). Ahaggar, the *Kel Ṛezi.*

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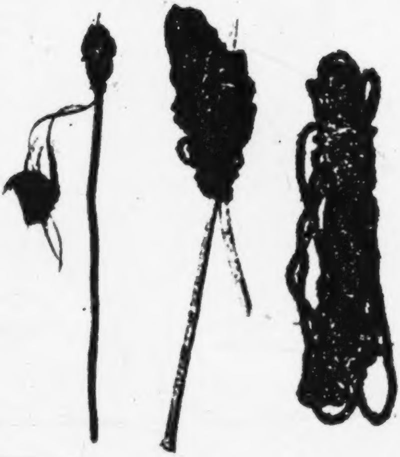

Fig. 208. The manufacture of a cord of goat's hair: (1) the hair (*éhafilen*) is spun around a little stick (*aseggelem*). (2) The spun hair is trebled and twisted into a thread known as *tassarkit*, or *tassagit*, between two sticks (*iseggelam*, sing. *aseggelem*). (3) The finished cord (*ahellum*) which is made by trebling the *tassagit* thread. Ahaggar, the *Ağuh-en-tehlé* tribe. Dimension of the *aseggelem* stick to the left: 0.41 m long. (F.M. 74, 120, 122).

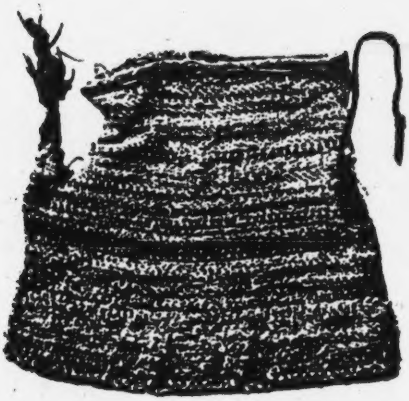

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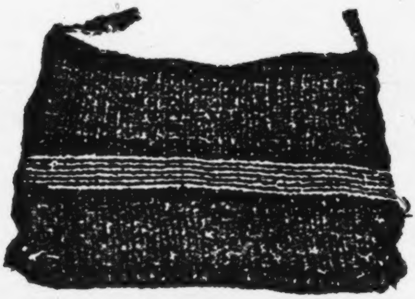
Fig. 209 a–b. Two bags (*téṛerirt*, pl. *tiṛrar*) plaited from hair of goat and camel.

a. Bag woven from hair of goat and camel and reinforced with leather around the opening. It is made into two halves which are sewn together. Ahaggar, the *Dag Ṛali* tribe. Dimension: 0.405 × 0.480 m. (N.M. G. 5245).



b. Bag woven exclusively of goat-hair. It has two leather straps for suspension. Dimension: 0.34 m long. Ahaggar, the *Dag Ṛali* tribe. (F.M. 259).

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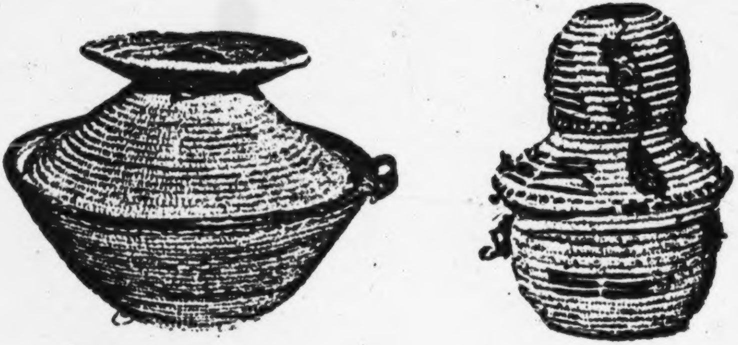


Fig. 210a–b. Two coiled baskets provided with lids.

[462] a. *takʼlulit*, basket plaited from pieces of palm leaves (*aġum*) and reinforced with coloured leather (goat-skin). Manufactured by women of the sedentary *Kel Ɣat* in Tasilé-n-Ajjer, bought from blacksmiths at Tamanṛaset in Ahaggar. Dimension: 0.13 m high. (F.M. 227).

b. *adabun*, basket plaited from pieces of palm leaves (*aġum*). It is ornamented with coloured leather thread and with woollen yarn. Ahaggar, blacksmiths at Abalessa. Dimension: 0.205 m high. (N.M. G. 5837a–b).

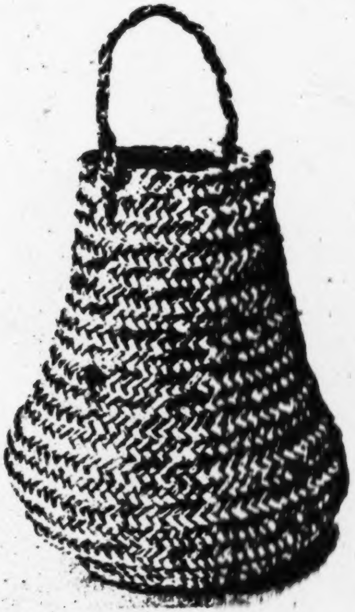
283 This stick, which is held in the right hand, is turned around its own axes while the hair taken out from the mass with the left hand is occasionally moistened with water or with spittle. The stick upon which the hair is spun is known as *aseggelem*. I have noted in Ahaggar that a length of 50–60 metres of spun hair can be made in about twenty minutes. Such a lenght of spun hair is trebled and attached to two sticks also known as *aseggelem* (pl. *iseggelam*). It is twisted together by two women each holding one of the sticks, and may be conserved for some time before it is finally made into a rope by further trebling and twisting (cf. Fig. 208). Certain cords to be used in connection with riding camels (e.g., reins) are not twisted in the above manner, but are plaited (cf. Fig. 51). The spun hair is used for the manufacture of certain objects without twisting (cf. Fig. 167a–b). Lhote states that the hair growing on the knees and neck of barbary sheep is also used for spinning (Lhote 1955a, p. 319).

[237] The Northern Tuareg spin camel's hair or wool (*teḍuft*) which is used for very few purposes (cf. [286] p. 67). But camel's hair is sometimes mixed with goat's hair to be spun for thread used for a primitive type of weaving; true weaving is an unknown craft among the Tuareg while important to Arab pastor- 286 alists of the Northern Sahara. The Tuareg type of primitive weaving with spun hair is carried out *[415] with no other implement but the hand; it is used for small transportation bags known as *tiṛṛar* (sing. *téṛerirt*), a word, according to Foucauld, derived from Arabic (cf. Foucauld 1951–52, IV, p. 1776) [114] (cf. Fig. 209a–b). I have myself never had the opportunity to see how weaving of this type is done.

A photograph illustrating a women making a bag from spun hair is reproduced by Lhote, who states 286
that bags of this nature are rarely manufactured nowadays and are made exclusively by a few noble 415*
women of the *Kel Ṛela* tribe (Lhote 1955a, p. 319 f., pl. XV p. 384). This statement does not agree 462
with information gathered by myself in Ahaggar, where I was told that bags were made from spun 565
hair by Tuareg women of other tribes and notably by women of the *Isekkemaren* class. 114

In Ayr spinning of cotton is performed mainly to obtain sewing thread, which is considered superior 283
to European thread for sewing cotton clothes. To my knowledge most pastoral women do not spin [432]
their own cotton thread but buy it at the market of Agadez. However I have noted the existence of
simple cotton bows in a *Kel Tédalé* camp in the northern part of the Ayr Massif. The occurrence of [171]
the simple cotton bow among the Ayr Tuareg should no doubt be viewed in connection with the use
of this implement in the Western Sudan (cf. Lagercrantz 1950, p. 260 ff.) from where the cotton plant [248]
has also been introduced. [172]

Coiled basket-work plays an important part with the Tuareg, particularly the Northern Tuareg 285
who are experts in this technique which is related to sewing. A very primitive type of coiled basketry



[824]

Fig. 211. Basket (*alegargar*) plaited from date palm leaves (*afum*). The handle is of date palm bast (*asan*). Ahaggar, blacksmiths at Abalessa. Dimension: 0.38 m high. (N.M. G. 5835).

[[text continues on p. 269]]

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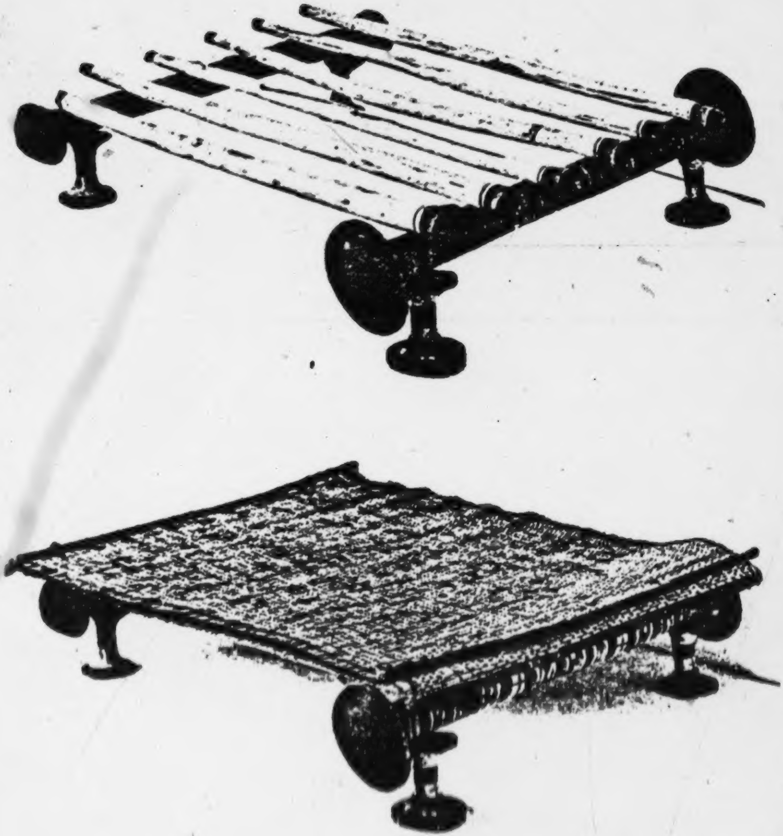

Fig. 212a–b. The large wooden bed (*tédabut*) which is used by all pastoral Ayr Tuareg.

a. The wooden skeleton consisting of the following parts:— (1) Four wooden legs (*tésetkelt*, pl. *tisetkal*). (2) Two horizontal cross-beams (*tabatukat*, pl. *tibatukatin*) carved into the shape of a disc at their ends. (3) Six horizontal poles (*afasas*, pl. *ifesasen*) resting in shallow grooves of the horizontal cross-beams. These poles are made from wood of a tree called *koriya*; this type of wood is also used for the heavy cross-beam seen in the front, while the hindmost cross-beam is made of wood called *tereza*.

b. The wooden skeleton covered with two mats (*tésbert*, pl. *tisebrin*) of *afezu* grass (*Panicum turgidum*). The stems of this grass are tied together with leather strips. Beds are frequently covered with three mats. Dimension of the bed: ca. 1.70 × 1.36 × 0.21 m. (N.M. G. 6640a–o).

may be seen in Fig. 167a–b illustrating baskets used for the manufacture of butter-milk cheese in 285
Ahaggar. True coiled basketry is sewn with a little awl (*tistent*) (Fig. 218a). [413]

The technique of coiled basket work is used in the manufacture of a great many receptacles among the Tuareg of Ahaggar, and coiled basketry made and utilized by these Tuareg can be seen in Figs. 184, 185, 196a–c, 210a–b.

The Ayr Tuareg apparently do not make coiled basketry to a very great extent, but they [184]
know a technique related to that used in Ahaggar, and also sew with a small awl (*ėstan*). The [432]
reason why so many Ayr pastoralists make very little coiled basketry work probably lies in the fact [266]
that plates, bowls, and other receptacles of this type can be obtained at the market of Agadez at very
low prices.

In the manufacture of plaited basketry the Ayr Tuareg are experts. They use the leaves of the dum [824]
palm for plaiting a great many different articles such as tent-mats, containers, and the like. When [413]
large mats and similar objects are made, the palm leaves are always plaited into narrow bands which
are sewn together with pieces of leaves by means of a large needle (*tasubla*) (Fig. 220b). Plaiting dum [462]
palm leaves is one of the most important tasks of women among the *Kel Ayr*. Pastoral Tuareg of [184]
Ahaggar in contrast to those of Ayr do not engage much in plaiting basketry, and I believe that most
of them are unaware of this technique which is known to all sedentary agriculturists of Ahaggar. The
plaiting material used by these people is date palm leaves (*aġum*) from which they make mats, bags,
and similar objects. Baskets (*alegutguten*) like that reproduced Fig. 211 are manufactured by sedentary
agriculturists of Abalessa and are sometimes used by pastoral Tuareg. Another type of plaited basket
is that illustrated Fig. 135. It is made from palm leaves and has two handles made from palm bast [413]
twisted into a rope which is sewn into the basket by means of the large needle (*tangla*, or *tasubla*)
(Fig 220b). This basket type (*tėsenit*) is widely found throughout Northern Africa among sedentary [171]
people of the oases and in the Atlas. The sedentary agriculturists of Ahaggar use baskets of this kind [415] *
for many different purposes, and they play a part in agricultural work, e.g., to carry fresh soil to the
gardens (p. 191) and to remove soil when digging and cleaning out foggara canals.

The Tuareg have a third technique which can adequately be mentioned in connection with plaiting, [824]
namely the manufacturing of mats from the stems of the *afezu* grass (*Panicum turgidum*). These mats
are made from straws placed parallel to each other and fixed together by means of strips of leather.
These mats are known as *ėseber* or *tėsebert* according to their use and size. They play an important [351]
part in Ahaggar where they are used as a kind of windscreen surrounding all tents, and they are manu- [462]
factured by many women among the *Kel Ahaggar* (Figs. 268, 269). Mats of this type are also made by
some Ayr Tuareg for cheese manufacturing (Fig. 168), but Tuareg women of Ayr practise very little
this particular technique of mat making. Large mats made from *afezu* stems are used for bed covers, [352]
and in rare cases also for windscreens or sunshades, but these mats, which are found in all Tuareg [563]
camps together with the large wooden bed (*tėdabut*) (Fig. 212a–b), are not manufactured in Ayr but [462]
in the south, particularly by women of the *Igdalen* Tuareg. Mats manufactured by this method are [342]
used for an interior cover of the barrel-vaulted mat-tent (Fig. 265d); these mats are also imported [438]
from the south.

The Tuareg are expert at skin and leather work which constitues the most important craft in the 281

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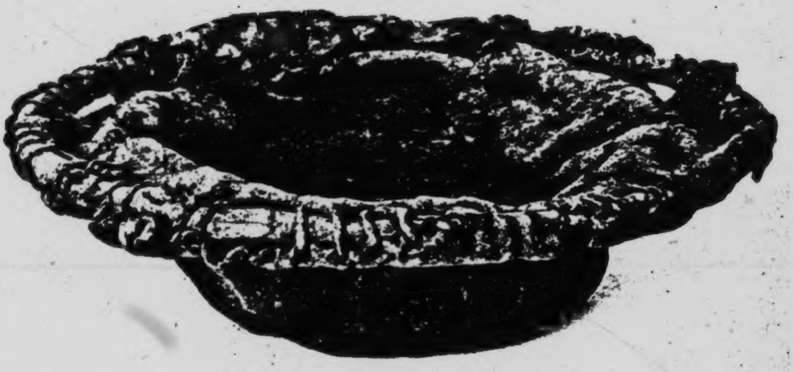

Fig. 213. Tanning receptacle (*ahaǵa*) of camel-hide lashed to a ring consisting of a bough bent into a circular position. Ahaggar, the *Dag Ṛali* tribe. Dimension: 0.55 m in diameter. (N.M. G. 5229).

281 [462] north where tents and a great many domestic implements and containers are made from skin. Skin work plays a certain role also for the Ayr Tuareg, but pastoral women in Ayr do not engage in this craft to the same extent as do women among the Ahaggar Tuareg.

281 192 The Tuareg have several terms for skin and leather. In Ahaggar I have noted the following:—(1) *élem*, the common word for the skin of most animals whether tanned or untanned; (2) *aḳḳer*, that is the common word for an untanned hide of all animals with the exception of camels, oxen, giraffe, and certain antelope; (3) *éṛit*, the skin of camels, oxen, giraffe, and certain antelope whether tanned or untanned. The terms noted among the *Kel Ferwan* Tuareg in Ayr are largely different:— (1) *awreṛeṛ*, an untanned hide; (2) *égochik*, tanned or untanned skin of all animals with the exception of oxen, camels, giraffe, and certain antelope; (3) *éṛit*, tanned or untanned skin of oxen, camels, giraffe, and certain antelope; (4) *esarku*, tanned skin of oxen.

281 I have already mentioned that camels are killed in a peculiar way and partitioned before skinning so that the hide is never removed entire. I have stated in the same connection that pastoral Ayr Tuareg do not use camel's hide in their crafts, and I have mentioned that though camel's hide plays a certain part in Northern Tuareg crafts they never tan it, while they tan skin of all other domestic animals and game animals such as gazelle and barbary sheep. The Northern Tuareg use camel's hide for lashing wood (cf. Fig. 86), and they also employ it for camel whips (cf. p. 84) and for certain other artifacts which are now to be described.

*[415] The Northern Tuareg use camel's hide for the manufacturing of a large tanning receptacle known as akaja (Fig. 213).

as *ahaga* (Fig. 213). Such tanning receptacles are made in the following way among the Ahaggar Tuareg:— A slender bough of the *tahunek* tree (*Rhus oxyacantha*) is bent and fixed into a circular form, and a piece of camel's hide soaked in water is attached to this frame. Sand and pebbles are thereupon placed upon the hide within the frame, which is lifted upwards by means of cords fastened to it and to the bough of a tree. This is done to produce the bowl-like form of the receptacle which is left filled with sand and pebbles and attached to the tree for a few days. Thus it is dried by the sun, and thereafter it will become very hard and keep the desired bowl-like form. Certain butter-containers made from raw camel hide are manufactured on the same principle, the entrance to such containers being made by the insertion of a piece of wood around which the upper part of the piece of hide is firmly attached. The sedentary agriculturists of Ahaggar also use camel's hide for the manufacture of a long rope (*akhamil*), which is used for drawing water from wells by means of oxen when the *tanut* system of irrigation (Fig. 132a–b) is employed. A rope of this kind is made from strips of soaked hide twisted together and hammered between stones to be left for drying in the sun. It is also said that camel's hide in the north is used for sandals of a particular type, while the Ayr Tuareg may use raw oxe-hide for sandals (cf. p. 301). The Ayr Tuareg may also employ raw oxe-hide for the manufacture of ropes and cords, and for camel whips. The hides of camels and oxen are known to the Tuareg by the common term *éyit* and they seem to possess certain qualities in common.

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The hide of such animals as goats, sheep, gazelle, barbary sheep is never used untanned among the Tuareg, and they may tan the hide of oxen and various other animals.

The Tuareg use a particular method for tanning goat-skin to be used for water-bags (*abayor*) (Figs. 215–217). I have watched this, particularly in Ahaggar, where a water-bag is prepared in the following way:— The animal is killed in the normal way of cutting its throat, and is then so skinned that the hide comes off almost entire. This is done by making the following openings with the knife: the head is cut off, cuts are made around the lower part of all four feet, and on the inner side of the

[415]*
[231]

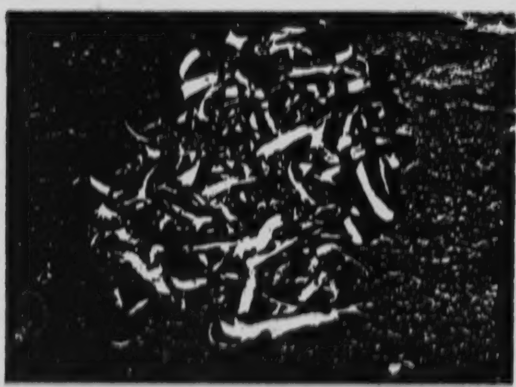

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Fig. 214. Tannin consisting of bark ([illegible]) of the *tamat* acacia (*Acacia seyal*) which is used for tanning water bags. The bark is left upon a piece of rock for drying. Ahaggar, the *Aguh-en-tehlé* tribe.

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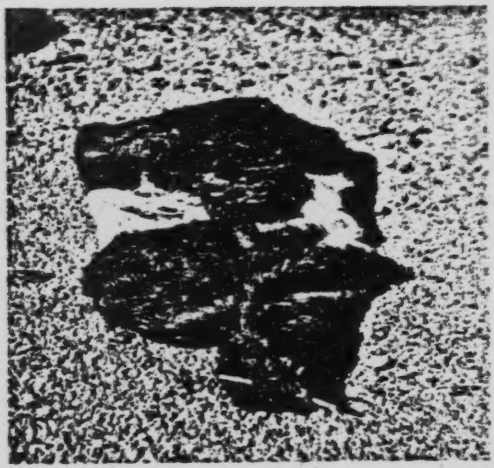

Fig. 215a. The bag to be prepared is filled with a mixture of water and *tiĥet* (bark) and is placed in the sun. The openings are provisionally closed by sewing with straw.

Preparation of a water bag (*abeyor*).

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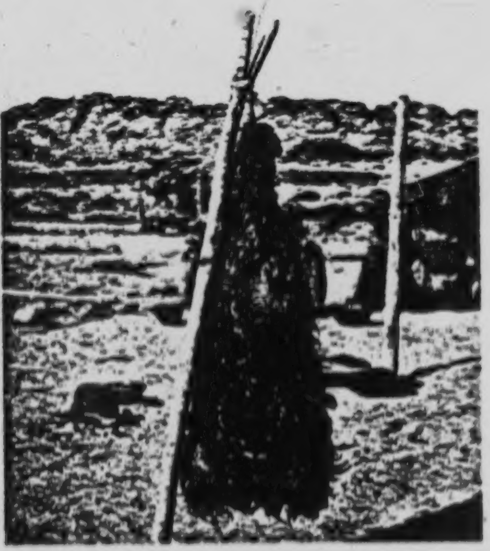

Fig. 215b. The tanned water bag is suspended for drying. Ahaggar, the *Dag Rali* tribe.

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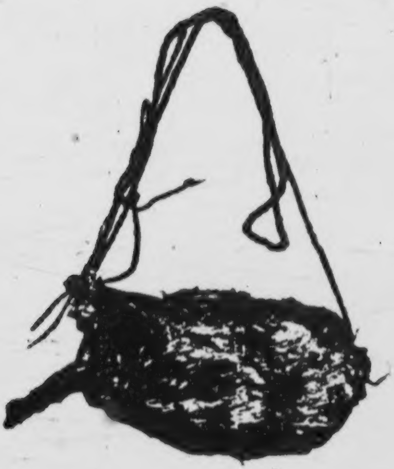

Fig. 216. Water bag (*abayoṛ*). Ahaggar, Olufsen's collection. (N.M.).

hind thighs over the animal's anus. This latter opening is made big enough for the skin to be drawn 281
off the body forwards over the neck. When the hide is removed and has been cleaned by scraping with
a knife, it is ready for tanning, which is done as follows:— The openings made on all four legs are [413]
closed simply by tieing the leg skin into knots, while the opening made on the inner side of the hind
thighs is sewn together with straw by means of the awl (*tistent*) (Fig. 218a), the anus opening being
closed with a cord tied around it. The hide is now closed except at the neck opening. It is filled with [824]
a mixture of water and bark (*tiñet*) of the *tamat* acacia (*Acacia seyal*), and the neck-opening is thereupon closed with a cord tied around it. The hide, which now forms a closed bag filled with bark and
water, is placed in the shade of the tent for seven to ten days to be turned and shaken every day. The
mixture of bark and water is thereupon poured out, the cuts sewn together or tied with knots are
reopened, the inner side of the hide is cleaned and treated with butter, and the openings are closed
again in a more solid fashion, the large hind opening being closed with strips of cotton placed over
the incision and sewn together with leather thread by means of the awl. A water bag prepared in
this way will very often contain reddish water, as the *tamat* bark yields a red colour, but nevertheless
all Tuareg consider bark of the *tamat* acacia as the very best tannin for water bags. Bark of *abser* [824]
(*afagag* in Ayr) (*Acacia Raddiana*) and also bark of *tahunek* (*Rhus oxyacantha*) may be used for tanning
water bags. Water bags are, with very rare exceptions, made from hairy skin because they keep the
water cool and fresh. The large open irrigation pail (*aga*) is made from skin tanned with bark like [415]*
water bags, but to my knowledge bark tanning among the Tuareg is not employed for other articles.

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*[415]

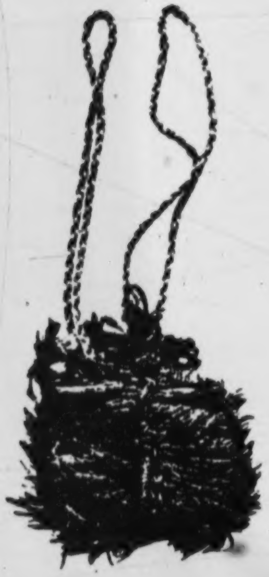

Fig. 217. A rolled-up water bag (*abayoɣ*). When out of use the Tuareg preserve their water bags in this way in order that they shall not crack. The skin of a dry water bag is extremely hard. It is soaked in water for some time before it becomes ready for use.

[413]

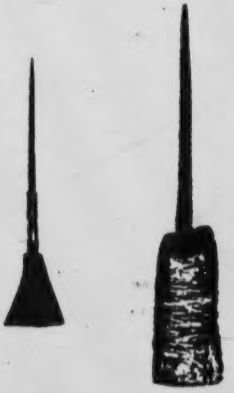

Fig. 218a–b. Sewing awls.
a. Awl (*tisteni*) of the type used for sewing in Ahaggar. Made by blacksmith at Tamanɣasset. Dimension: 0.115 m long. (F.M. 288).
b. Awl (*éndel*) of the type used for sewing sandals. Ahaggar, the *Aġuh-en-tehlé* tribe. Dimension: 0.170 m long. (F.M. 99).

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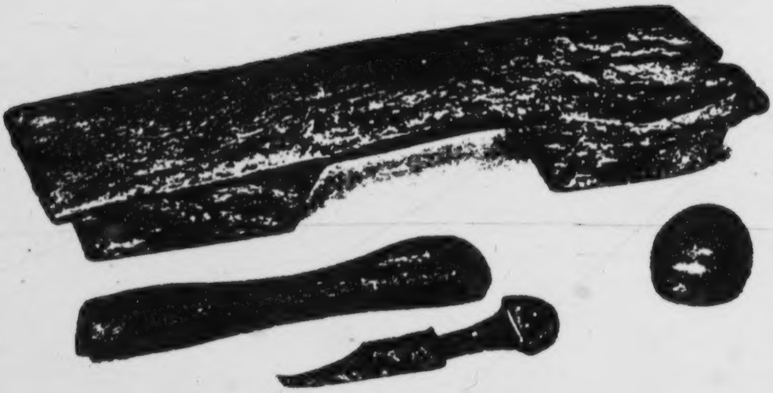

Fig. 219a–d. Implements used for skin and leather work in Ahaggar.

a. Wooden cutting board (*elkeyleb*). It is made from wood of the *taburaḳ* tree (*Balanites aegyptiaca*). 0.480 m long. (N.M. G. 5867). [824]

b. Wooden implement (*asettenu*) for smoothing leather. Wood of the *taburaḳ* tree. Dimension: 0.248 m long. (N.M. G. 5868).

c. Heavy black stone (*tazzei*) with level under side. Used for smoothing leather. Dimension: 0.079 × 0.061 m. (N.M. G. 5873).

d. Knife (*telmasit*). Dimension: 0.163 m long. (N.M. G. 5869).
Manufactured and used by blacksmiths in Ahaggar, Abalessa.

The vassal Tuareg of Ahaggar use hairy skin for the manufacture of certain receptacles other than water bags (cf. Figs. 111, 125). I have never seen hairy skin bags of this type in Ayr, and even in Ahaggar most skin bags are made from depilated skins. In Ahaggar the hair is removed from the hide by means of a plant known as *tachkat* (*Pergularia tomentosa*). A bundle of this plant is dipped into hot water and is rubbed against the inner side of the hide which is spread out over a large stone or a similar object. Even after one day the hair can then be removed by one or two women who pluck it with their fingers. In Ahaggar I have also been told by sedentary agriculturists that the hair can be removed by means of salt. The salt is placed upon the inner side of the hide and this treatment makes it possible to scrape away the hair by means of a knife or a stone. The Ayr Tuareg questioned about their methods of depilation place ashes from the fireplace on the inner side of the hide which after this treatment is covered with moistened sand for one day. After this treatment the hair is removed with a knife or simply with the fingers. 281 [565] [415]* [824]

The tannin generally used by the Tuareg of Ahaggar and Ayr for articles other than water bags 281 824

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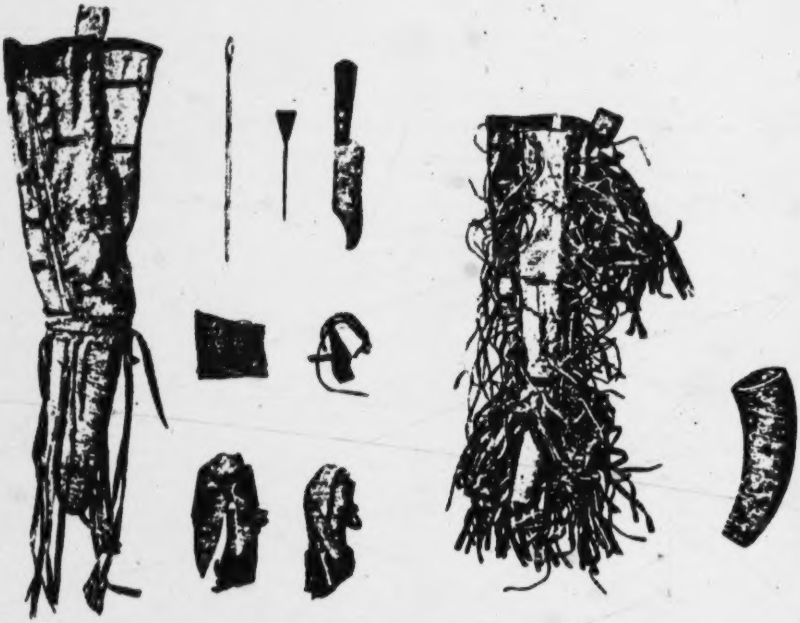

Fig. 220a–g. Sewing bags and their contents.

a. Sewing bag (*askagen*) made of decorated leather sewn to a piece of hollow ox-horn which constitutes the bottom of the bag. Dimension: 0.415 m long. Ahaggar, the *Dag Ṛali* tribe. – In the bag were the objects b–e.
b. Large sewing needle (*tasugla*, or *tasubla*).
c. Sewing awl (*tissent*).
d. Leather knife (*telmusit*).
e. Four pieces of leather (*izzeman*) for repairs. (N.M. G. 5225a–e).
f. Sewing bag (*askagen*) of the above-mentioned type but richly decorated with leather fringes. Ahaggar, *Ḥarratin* of I-n-dalaġ. Dimension: 0.335 m long. (N.M. G. 5241).
g. Ox horn (*isek*) cut for bottom of sewing bag (*askagen*). Ahaggar, *Ḥarratin*. Dimension: 0.136 m long. (N.M. G. 5228).

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is fruit of the *taġġart* acacia (*Acacia scorpioides*) which is known to the Ayr Tuareg as *tiggart*. The fruit is pounded into a kind of flour or powder which is mixed with water in the large tanning receptacle made from camel hide (Ahaggar) or in a large wooden or enameled receptacle (Ayr). For tannin the Ahaggar Tuareg also use leaves of the *tamat* acacia (*Acacia seyal*). These are collected as follows: a large bough is cut off the acacia, and is left to dry in a clean, sandy place. When the bough and its leaves have been dried by the sun for some time, the bough is beaten with a stick so that the leaves

fall to the ground where they are collected. They are conserved dry until tanning takes place when 281 they are pounded in the large mortar and mixed with water in the tanning receptacle. The Ahaggar 824 Tuareg may also use galls of the *tabarekkat* tamarisk (*Tamarix aphylla*) (cf. Foucauld 1951–52, II, p. 885 & Maire 1933, p. 159) and fruit of the *tedjoq* tree (*Pistacia atlantica*) (Maire 1933, p. 149).

In addition to treatment with these vegetable tannins the skin is also treated with butter or rubbed 281 with fatty substances, such as a piece of the brain of a slaughtered animal. These are the main features of skin tanning which in Ahaggar takes place in the following way:— (1) The hairy or depilated hide is placed in the tannin receptacle which contains one of the above-mentioned vegetable tannins mixed with water. The hide remains in this receptacle for one or two days if fruit of the *taggart* acacia is used, while three or four days will be necessary using *tamat* leaves known as *ala*. The hide in the receptacle is daily rubbed between the hands in order that the tannin may penetrate well into it. (2) When the hide is removed from the receptacle it is washed with cold water and thereupon dried in the shade.

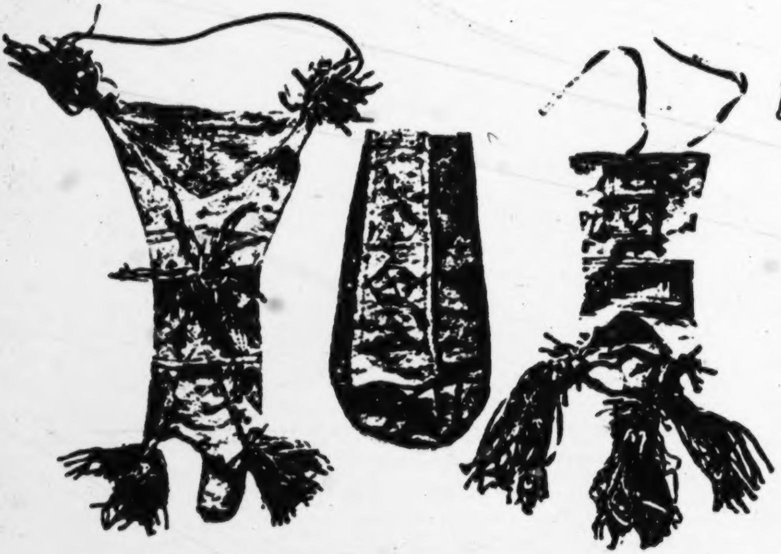

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Fig. 221 a–c. Skin bags.

a. Bag of *tichehdikwat* type. Ahaggar, Olufsen's collection. Dimension: 0.45 m long. (N.M. G. 1.134).

b. Bag known as *abelbod*. Ahaggar, the *Afeb-en-tehlé* tribe. Dimension: 0.36 m long. (N.M. G. 5239).

c. Bag of *tichehdikwat* type. Ahaggar, probably manufactured by Ahaggar Tuareg af Tamesna. Dimension: 0.30 m long – without fringes. (N.M. G. 5219).

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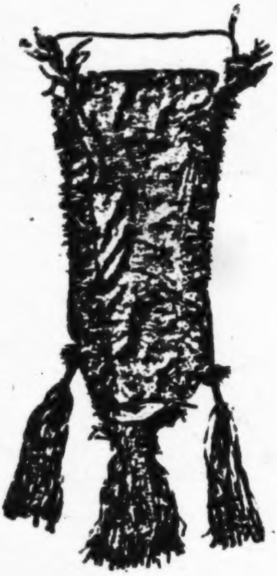

Fig. 222. Large bag of *téchchékwat* type. The *téchchékwat* bags (pl. *téchchékwatin*) are normally made of entire skins of kids or goats while this large bag is made from several pieces of leather sewn together. Ahaggar, probably manufactured in Ayr. Dimension: 0.92 m long – not counting the leather tassels. (N.M. G. 5216).

281 (3) Butter or fatty substances are rubbed into the inner side of the skin, after which the skin is covered with wet sand for a while. (4) The skin is dried and thereupon softened by rubbing it between the hands – a task sometimes performed by men, though tanning is the task of women.

281
413 The implements used by the Tuareg for the manufacture of skin articles are few and simple. Sewing of skin is rarely done with a needle, though the large iron neddle known as *tamba*, and in Ahaggar also as *tasugla* (Fig. 220b), is used for sewing among the Ahaggar Tuareg in the manufacture of donkey saddles (cf. Fig. 86, p. 110). But with such rare exceptions the Tuareg sew their skin articles by means of the little awl known as *tistent* in Ahaggar (Fig. 218a), as *éstan* in Ayr. With this implement the women pierce holes close to each other and through them draw thin leather thread [283] (*ezzemi* in Ahaggar). Sinew thread is not in general use among the Tuareg, but I knew a gazelle hunter in Tasîlé-n-Ajjer, who took out the sinews of the hind leg of a killed gazelle to use them for mending his leather belt. With this exception I have never seen sinew thread employed for sewing among pastoral Tuareg and my fairly large ethnographical collection containing all types of Tuareg skin and leather articles contains no specimen sewn with sinew thread. For sewing sandals the Ahaggar 413 Tuareg use a large awl which is known as *éndel* (Fig. 218b). This word is also used for iron implements

[text continues on p. 280]

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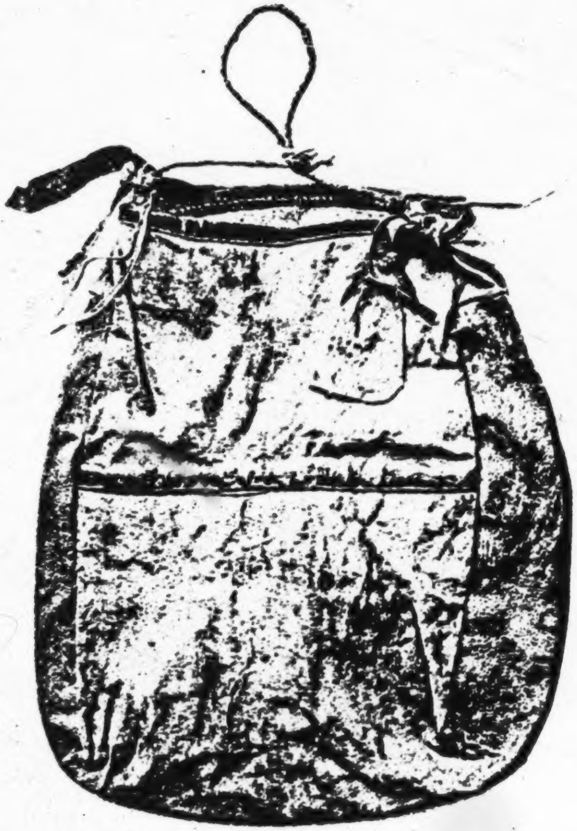

Fig. 223. Skin bag (*adaber*) for transportation of personal objects on journeys. Dimension: 0.515 × 0.425 m. (N.M. G. 5238). Ahaggar, the *Aguh-en-tehlé* tribe.

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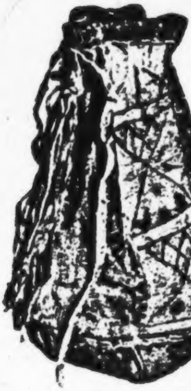

Fig. 224. Decorated skin bag (*abelbod*) for the conservation of tea leaves. Ahaggar, the *Ağuh-en-tehlé* tribe. Dimension: 0.25 m long. (F.M. 151).

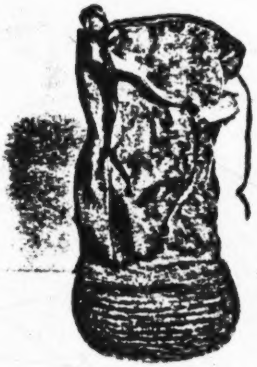

Fig. 225. Skin bag known as *alegutgut* (pl. *alegutguten*). The specimen depicted is an old bag which shows that the bottom consists of a bowl plaited in coiled technique and covered with leather. New bags of this type are ornamented with leather fringes. These bags are used for the transportation of tea glasses, sugar, and the like. The correct name of such bags according to some Tuareg is *eggebankob* (pl. *eggebankobben*). Ahaggar, the *Ağuh-en-tehlé* tribe. Dimension: 0.33 m high. (F.M. 80).

413 [321] [757] 237 [301] used to burn marks of property into camels and donkeys. The large awl may also be employed for wood and horn work after heating in the fire. Horn or bone material, however, plays a little part to the Tuareg. A horn implement common to all Tuareg is that depicted Fig. 230; it is used for sucking out blood of sick persons after bleeding and is widely known in the Sahara. Arm rings (sing. *éweki*) made of horn are worn by many adult men among the *Kel Ajjer*, but are rare in Ahaggar. Among the

[text continues on p. 282]

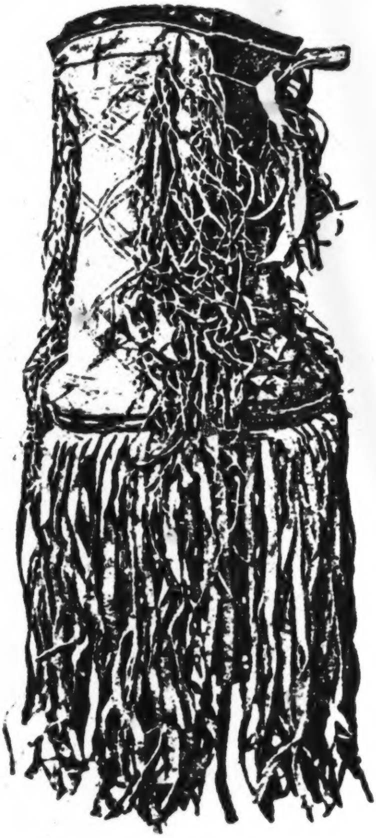

Fig. 226. Skin bag of the type provided with a plaited bowl for bottom and known as *alegurgut* or *eggebankob*. The specimen is a new one heavily ornamented with leather fringes. Ahaggar, the *Afuh-en-tehlé* tribe. Dimension: 0.312 m high – without the fringes. (N.M. G. 5243).

237 Ayr Tuareg a piece of ram's horn may serve as an amulet case attached around the upper arm. Horns
*[415] of barbary sheep are used for butter containers among the Northern Tuareg (cf. p. 223; Fig. 165),
who sometimes use a piece of pointed gazelle horn for daubing antimony around the eye.

281 The Ahaggar women cut skin and leather with a small knife (*telmusit*), and a piece of wood (*asettenu*)
462 and/or a stone (*taẓẓet*) are used for smoothing the skin which is then placed upon a particular wooden
[413] board (*elkeyḷeb*) (cf. Figs. 219a–d). The Ayr Tuareg do not make so much refined skin work. Women
*[415] among the Northern Tuareg conserve their implements for skin and leather work in a particular bag
(*askagen*) which is made from leather attached to a bottom piece of horn (*isek*) (Figs. 220a–g).
[531] Northern Tuareg women take a great interest in their skin and leather artifacts, which are richly
decorated with fringes and hanging tassels, and with geometric designs in different colours. I have
386 noted the following colours among the Tuareg of Ahaggar and Tasilé-n-Ajjer:—

822 (1) *baba*, indigo which is introduced from the south in the form of balls.

(2) *tawnkent*, which is also known as *tafidet* and *taneẓeẓẓeft* according to Foucauld 1951–52, IV, p. 1934. It is a yellowish mineral which yields an entirely black colour frequently seen on ornamented skin bags. The mineral according to the Ahaggar Tuareg is introduced from the south, while the Tuareg of Tasilé-n-Ajjer claim that they obtain their minerals of this type from Serdeles north-east of Ṛat. – A black colour which is also known as *tawnkent* is said to be made by the Tuareg of Ahaggar in the following way:— Pieces of iron are put into water contained in some small receptacle, usually a tea glass. This receptacle containing water and iron pieces is covered with a bowl or a similar object in order that the sun light cannot penetrate. After a few days the water turns into a black colour to be used for skin dyeing.

(3) *semento*, a green colour derived from a mineral or a powder introduced from the south. According to some Tuareg this green colour is also made by means of a vegetable powder introduced from the north, from the region of Mzab.

(4) *khodarbas*, a powder which yields a green colour. It is said to be introduced from the south (from Tawa) and to derive from a tree known as *tafnit*.

[824] (5) *errumman*, the fruit of the pomegranate tree known as *terrummant* (*Punica Granatum*). It is used with a white mineral (alum), known as *aẓref n Tawat*, and introduced from In Salah. Parts of the pomegranate fruit and of this mineral are mixed with water to be used for a yellow or yellow-brown dye which is applied to many decorated skin bags for ground colour.

(6) *temesaruak*, a mineral introduced from the north (Mzab). It produces a yellow colour.

[243] (7) *herki*, a reddish brown colour obtained from a particular type of sorghum known as *tallak*
grown in the cultivation centres of Ahaggar.

(8) *tédersé*, a white colour obtained by placing the skin for about three days in a container with fresh milk to which a little salt is added. – Among Tuareg of Tasilé-n-Ajjer I was told that a white colour is also obtained from a kind of powder introduced from the Sudan.

386 Before use these above mentioned colours or dyeing materials are generally dissolved in water
[531] contained in a tea glass. When they are employed for the very fine geometric designs of leather bags
they are daubed with a small knife known as *telmusit* (Fig. 219b).

[439] It is interesting that most dyes used by the Northern Tuareg are introduced from the north or from the south,

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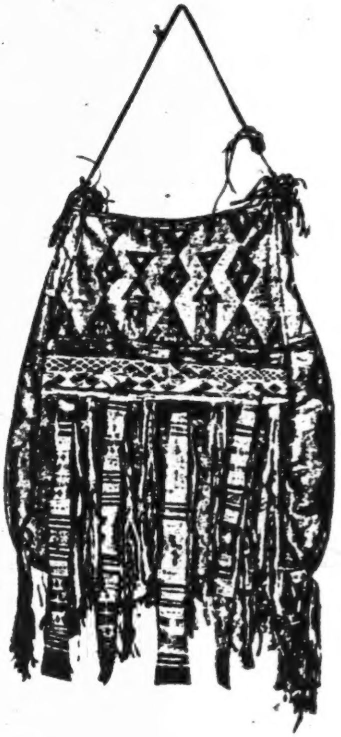

Fig. 227. Ornamented leather bag. Ahaggar, Olufsen's collection. Dimension: 0.60 × 0.38 m. (N.M. G. 1.109).

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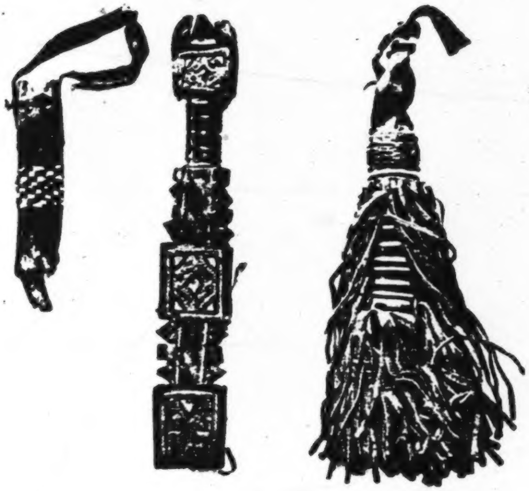

Fig. 228a–c.

a. A cylindrical hollowed piece of wood covered with leather. It is known as *tafendit* and serves to contain antimony (*tazult*). Ahaggar, blacksmiths of Abalessa. Dimension: 0.22 m long. (N.M. G. 5875).

[824] [276] [462] [565] b. Cylindrical brass tube covered with ornamented leather. It is known as *faralu wa n tuka* and serves for the conservation of *tuka*, that is ashes of burned *afezu* grass (*Panicum turgidum*). Ashes of this grass are used by some Tuareg for chewing tobacco. It is said in Ahaggar that containers of this type are made exclusively by noble women of the *Kel Ṛela* tribe, and that the containers should be worn only by noble Tuareg and not by vassals. The brass tube is always made by blacksmiths. Ahaggar, blacksmiths of Abalessa. Dimension: 0.265 m long (total length). (N.M. G. 5888).

c. A piece of cane covered with coloured leather and fringes of the same material. It is called *tafendit* and serves for the conservation of *tazult* (antimony). Ahaggar, the *Aġuh-en-tehlé* tribe. Dimension: 0.116 m. (N.M. G. 5267).

386 [281] [174] the south, or are obtained from plants grown by sedentary agriculturists. The technique of skin dyeing as practised by the Tuareg nowadays cannot be considered an ancient one in Tuareg culture. Its origin is probably to be looked for in the more developed civilizations of Northern Africa, and not in a nomadic culture like that of the Tuareg. Other dyeing methods known to the Tuareg may well be very ancient. I believe this to be true of the red ochre known to the Ahaggar Tuareg as *tameghoyt*,

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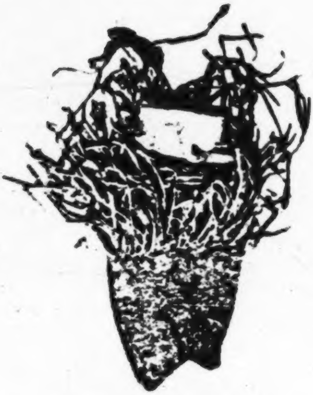

Fig. 229. Tobacco bag (*abelbad*) with the bottom made from the scrotum of a goat. Ahaggar, the *Ağuh-en-tehlé* tribe. Dimension: 0.22 m deep. (F.M. 94).

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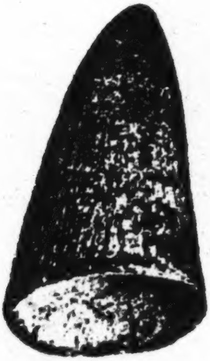

Fig. 230. Piece of ox-horn (*ésafé*) to suck out blood of bled persons. Ahaggar, the *Ağuh-en-tehlé* tribe. Dimension: 0.09 m. (F.M. 148).

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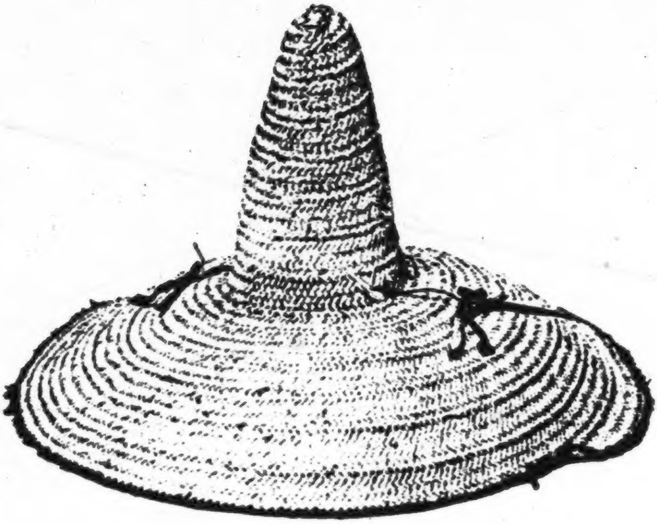

Fig. 231. Woman's straw-hat (*téké*) plaited from straps of date palm leaves (*ağum*). Ahaggar, the *Dag Ɣali* tribe; manufactured at Abalessa. Dimension: 0.565 m in diameter. (N.M. G. 5276).

386 to the Ayr Tuareg as *tamezgoyt*. It is found both in Ahaggar and in Ayr, and is used for dyeing tent-skins (cf. p. 361).

281 A number of the most common skin bags and similar objects of decorated leather work made by
462 Tuareg women in Ahaggar are reproduced in Figs. 220–229.

*[415] Though the pastoral Tuareg women in the north are excellent leather workers they find their superiors
[564] in the blacksmiths women and those of the *Imeggedezen* of Agadez. Women of these sedentary negroid groups provide pastoral Tuareg with leather objects like sword-sheaths, amulet cases, leather purses, large saddle bags, cushions, and the like (cf. Figs. 72a, 76, 121a–b, 172a–b, 198).

Dress

In this chapter on Tuareg dress I do neither describe all types of Tuareg garments nor dress ornamentation, 29
but content myself with a brief description of the prominent articles of dress and of 128
certain peculiar garments which are interesting and important for our understanding of the cultural
position of the Tuareg.

In Northern Tuareg country pastoral women sometimes wear a large hat plaited from date palm 292
leaves and known as *télé*, which literally means "shade" (cf. Fig. 231). However, hats of this kind, [285]
are never manufactured by pastoral Tuareg who obtain them from sedentary agriculturists. Hats of
the same type are very common further north in Africa where they are worn not only by women but [171]
also by men, and I believe that hats of this sort were introduced to the Tuareg by the Arabs and the [172]
Arabic speaking *Ḥarratin*, who came to Ahaggar about a hundred years ago. In Ayr I have seen
plaited hats worn by one or two black-skinned men of the *Kel Ewey* group. These hats are also used [184]
among the Hausa. True pastoral Tuareg like those of the *Kel Ferwan* group do not wear hats.

It seems as if the hat is a foreign element in Tuareg culture, and that as traditional head garments 291
the Tuareg have nothing beyond the veil and the headcloth described in some detail in the general 294
chapter about the Tuareg (cf. p. 14 f.). We have seen that both the veil and the headcloth are sometimes
referred to as *alechchu*, "a piece of Sudanese indigo cotton sewn together from narrow strips
or bands", for the traditional veil and headcloth are made from this type of cotton which is highly
esteemed for many other garments. It seems to be the oldest type of cotton used for dress among the
Tuareg, while white cotton of an ordinary type has been introduced more recently among them.
The Ayr Tuareg use the word *maser* for white cotton woven in one piece, and they say that this word
refers to *Miṣr* (Egypt) wherefrom cotton of this particular type was first introduced. It came much
later than indigo cotton of Sudanese type, which has been known in Ayr from very ancient times.

Indigo coloured cotton introduced from the Sudan is very expensive and is nowadays used mainly 291
for festive occasions, while daily dress, including the veil, is made of European cotton, which is indigo [292]
or white in colour. There can be no doubt that the comparatively cheap European cotton has displaced [178]
the use of skin or leather for daily dress. For we know that skin shirts were extremely common in
Ahaggar at the beginning of the present century (cf. Foucauld 1951–52, I, p. 112), and Duveyrier
says that "le pardessus en peau" is held in esteem (Duveyrier 1864, p. 406). Before Duveyrier we have
Lyon's statement that Tuareg of the Fezzan area use skin (leather) for dress:— "A leather kaftan is
also much worn, of their own manufacture, as are leather shirts of the skins of antelopes, very neatly
sewed, and well prepared". In addition Lyon depicts a Tuareg wearing a leather shirt with ample
sleeves (Lyon 1821, p. 110).

[p. 287]

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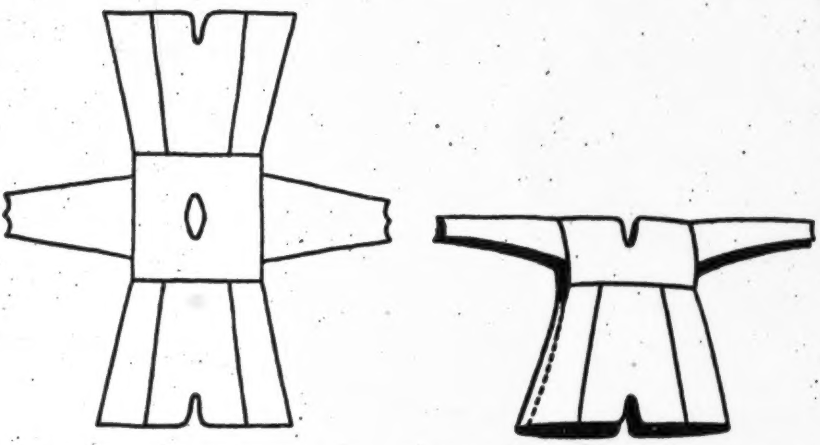

Fig. 232. The cut of a leather shirt (*ṭébetiḳ*) from Ahaggar. The shirt is ornamented with leather fringes along the seams and at the ends of the open sleeves. The shirt is made from sheepskin dyed with indigo. Ahaggar, the *Kel Inɣer* tribe. Dimension: 1.15 m long, 0.60 m wide at the waist. (Musée de l'homme, No. 41–19–1645).

291 I have never seen a skin shirt among the Tuareg, but it seems as if skin shirts are worn in certain [237] parts of Ahaggar even at the present time. They are described from the regions north and east of the Kudia, and are made by certain tribes of the *Iseḳḳemaren* who use skin of barbary sheep or goats for the lower part of the shirt, fine goatskin for the upper part covering the shoulders, and gazelle skin or the skin of kids for the sleeves (Mounier 1942, p. 158). A skin shirt is found in the "Musée d'Ethnographie et de Préhistorie du Bardo" in Algiers. It is called *tébetiḳ*, and is described as follows:—

291 294 "Le corps de la tunique figurée est fait de trois pièces de cuir: une pour les épaules et la poitrine, avec un trou pour passer la tête, deux autres pour le devant et le dos. Ces deux dernières pièces sont reliées sur le côté par deux bandes de cuir verticales; le tout formant une sorte de robe évasée à la base. Les manches sont ouvertes dans le sens de la longeur, donnont ainsi liberté complète aux bras. De petites franges de cuir très fines décorent l'ensemble à l'emplacement des coutures. – Dimensions: hauteur totale 1.20 m; taille 45 cm; manche 55 cm. Inventaire du Musée: F 9". (Balout 1959, pl. VI).

291 The above-described shirt is clearly of the poncho type, and this is also the case with three leather shirts preserved in the "Musée de l'homme" in Paris. The shirts seem to be identical in cut and size, [281] and are here briefly described by reference to one of them. It is made from tanned and depilated sheep skin, dyed with indigo. Its total length is 1.15 m and width at waist 0.60 m. Its museum number is 41.19.1625 and it is said to have been manufactured by a woman of the *Kel-Inɣer* tribe (*Iseḳḳemaren*). [292] It is also stated in the museum's card-index that such shirts are worn by poor people in Téfedest and by *Dag Ṛali* slaves.

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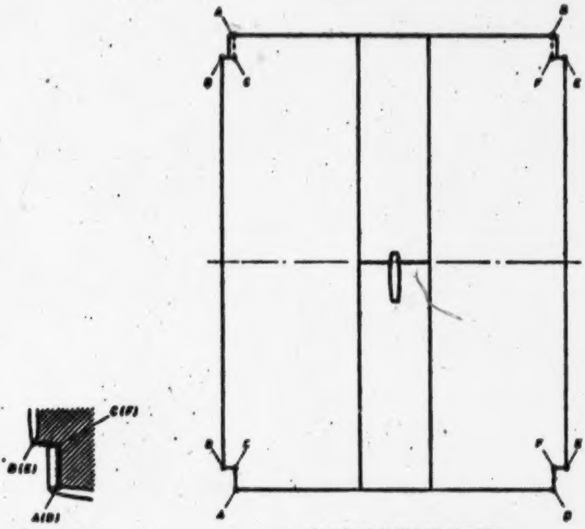

Fig. 233. Cut to illustrate a Tuareg cotton shirt of poncho type. The central part of this shirt is made from two pieces of cotton sewn together at the neck opening; most shirts have a single central cotton piece. The shirt depicted derives from Tasilé-n-Ajjer where a complete woman's dress was bought in 1952. This dress comprises the following pieces which are all made of modern European cotton:—

- **a. Shirt (*tékamist*) of indigo cotton. Dimension: 1.89 m wide at the top, 1.32 m long. The *Kel Terurit* tribe (cf. illustration).**
- **b. Shirt (*tékamist*) of similar cut but of white cotton. On festive occasions the women frequently wear a white shirt under the indigo-coloured one. Dimension: 1.89 m wide at the top, 1.34 m long. The *Kel Terurit* tribe.** [292]
- **c. Large piece of indigo cotton 192 × 1.15 m which serves as underskirt or petticoat (*asegbes*). Élèzi (Ft. Polignac).**
- **d. Large piece of indigo cotton 1.565 × 1.935 m which serves as a kind of shawl covering head, shoulders, and back. It is called *tikest*. Élèzi (Ft. Polignac).**
- **e. Headcloth (*ékerhey*) similar to the man's veil (*tagulmust*). It is made of Sudanese indigo cotton measuring 2.14 × 0.25 m. Élèzi (Ft. Polignac). (N.M. G. 5488a–e).**

It is more than likely that skin shirts of poncho type have also once been used in Ayr, where the Tuareg say that skin was widely used for dress during the 1917-revolt when cotton was scarce. 291

The cotton shirts worn by adult Tuareg men are of various types and possess individual names. The Ahaggar Tuareg generally wear a sleeve-less shirt called *takerbast*, or a shirt known as *tékamist* which has large sleeves. There are other names for shirts with or without sleeves (cf. Foucauld 1951– 291
52, I, p. 610 f.), but all shirts are of the same basic cut based on the poncho principle. The poncho 294
cut is very obvious the more so as the shirts are frequently made from one piece of cotton provided

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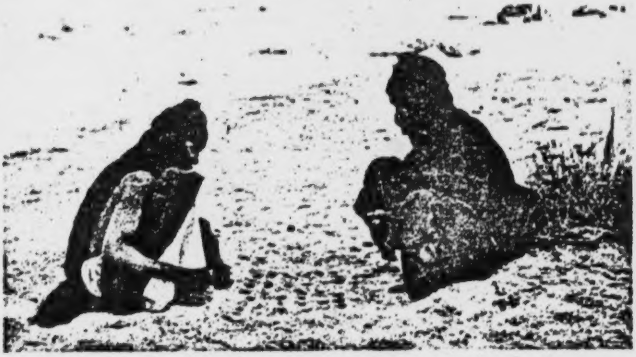

Fig. 234. Photograph illustrating the Tuareg cotton shirt open (left) and closed (right). The two Tuareg are playing a sort of draughts called *keraḍ*. Ahaggar, the *Aǧuh-en-tehlé* tribe.

291 294 with an opening for the head, and folded and sewn together at the lower part of the sides. The folded piece of cotton may also be united at its lower parts by the insertion of a trapeze-like piece of cotton known as *tébanik*. The cotton shirt worn by most Tuareg men in Ayr is known as *teketket*, and is of the same poncho cut as the shirts mentioned above from Ahaggar.

All Tuareg men wear large and wide cotton trousers known as *ékerbey*. The cut of these trousers is the same in Ahaggar and in Ayr. A pair of trousers I wore when among the Ayr Tuareg is 1.10 m wide at the waist where they have a channel for the insertion of a leather cord (*tamennalt*) by means of which the trousers are laced up. The total length of the trouser legs is 1.06 m, so that the width is a little larger than the length. The trousers are sewn from three pieces of cotton. They consist of a front and back piece identically cut and sewn together at the sides; a third piece of cotton is inserted between the legs (Fig. 236).

291 The trousers are extremely large and loose. They are well-suited not only for the hot desert climate but also for camel riding. The Tuareg sometimes pull their trousers up over the knees so that they are entirely bare-legged. They do this, for instance, when they water domestic animals from wells and in various other situations where long trousers are embarassing. But they will never pull up their [576] trousers in presence of foreigners (particularly foreign women) or in the presence of parents-in-law [606] (particularly mothers-in-law). For it is extremely shameful for a man to show himself bare-legged to persons to whom he must also not show his mouth, and the Tuareg express this fact by saying that "the veil and the trousers are brothers". In general, young boys wear a shirt of poncho type, in addition to which many of them also wear a leather loin-cloth (*argaǧ* in Ahaggar) made of goat skin. Such loin-cloths are attached around the waist and drawn between the legs. They are worn by certain vassal boys and by young slaves almost up to the time of initiation and veil adoption, and trousers may be adopted at the same time as the veil. It seems as if the loin-cloth has also once been a traditional garment of grown men, for Rodd states that they sometimes wear a tanned skin around the loins below the trousers – more especially in bush country where burr grass is very prevalent (Rodd 1926a, p. 164).

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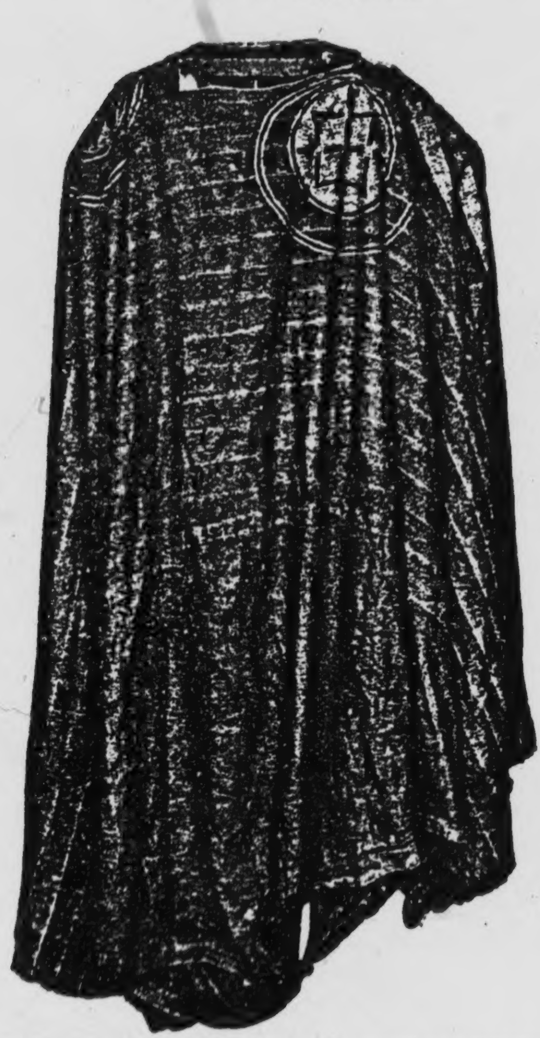

Fig. 235. Tuareg cotton shirt (*tekamist*) of Sudanese indigo cotton. Ahaggar, Olufsen's collection. Dimension: 1.25 m long, 2.53 m wide. (N.M. G. 1.6).

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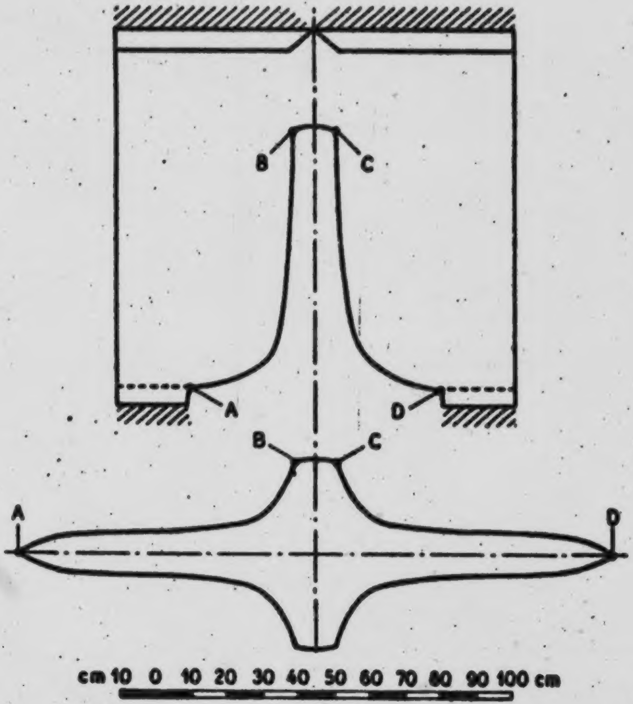

Fig. 236. Cut of Tuareg trousers (*ékerbey*). They are made from two identical pieces of cotton sewn together at the sides and united at the inside with a particular piece of cotton sewn to the legs. The trousers are very wide and are laced around the waist by means of a leather cord called *tamennalt*. Dimension: 1.06 m total length, 1.10 m wide at the waist. (Author's collection).

291 Veil, shirt, and trousers constitute the main elements of Tuareg dress. On festive occasions many
292 men also wear a particular type of shoulder belt or bandoleer. This consists of a long strip of coloured cotton (frequently red) wrapped several times around the waist and over the shoulders forming a cross over the chest and over the back. This belt or bandoleer is known to the Ahaggar Tuareg as *tirzenin*, or *ibeyderen*, to the Ayr Tuareg as *técherbit*. Rodd ascribes a practical use to this belt, which, he says, the Tuareg wind tightly around their bodies as support for the abdomen on which the motion of the camel imposes great strain during long marches (Rodd 1926a, p. 194). I have myself never seen Tuareg use such belts on long journeys, and have only seen them in use on festive occasions connected with

292 ceremonial ridings as those described on p. 104 f. I have been informed both in Ahaggar and in Ayr that bandoleers were used exclusively for such purposes. Rodd depicts a rock-drawing from Timia in Ayr and believes that it perhaps represents a man wearing a bandoleer (Rood 1926a, p. 194, pl. 40 [172] p. 305). This may be so, but I have been told by Ayr Tuareg of the *Kel Ferwan* group that bandoleers were introduced among the Ayr Tuareg by the French when they formed the camel patrol made up [848] of Tuareg from different Ayr tribes. However, my informants also claimed that the use of bandoleers for camel riders was an ancient custom in the north among the Ahaggar Tuareg, from where it was [565] introduced to Ayr by the French. Informants of Ahaggar and Tasilé-n-Ajjer told me that the custom was traditional to noble Tuareg but not to vassals, though Tuareg of the vassal class also wear bandoleers nowadays.

291 Apart from the head-cloth (*ékerhey*) the following garments are typical of Northern Tuareg women:—(1) *tékamist*, that is a large and wide shirt of cotton, in form and cut identical with the man's shirt; (2) *asegbes*, a large piece of cotton used for a skirt or a petticoat; this is fixed tightly around the waist merely by folding it at the upper edge; (3) *tikest*, a large piece of cotton worn as a shawl over the shoulders and head, covering the head-cloth.

In addition to the head-cloth (*adalil*), which they frequently wear rolled up on the top of the head, Tuareg women of the *Kel Ferwan* group wear three main garments:—(1) *aftek*, a very short shirt of poncho cut. It is very akin to the shirt worn by Hausa-speaking women of Agadez, who use the words

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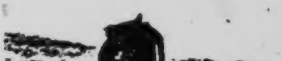

Fig. 237. Slave-boy wearing the loin-cloth depicted above Fig. 238. Ahaggar, the *Aguh-en-tehlé* tribe.

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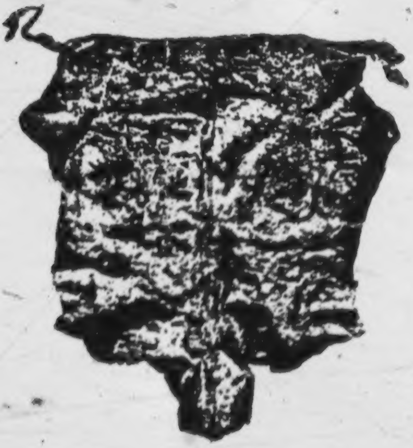

Fig. 238. Loin-cloth consisting of a piece of tanned and depilated goat-skin. It is known as *arfag* and is worn mainly by boys and young slaves. Dimension: 0.715 × 0.575 m. Ahaggar, the *Afuh-en-tehlé* tribe. (N.M. G. 5258).

291 *liga* or *tagua* for this garment piece; (2) *téri*, a large piece of cotton worn as a skirt wound around the waist in the same way as in the north; (3) *tesegbes*, a large piece of cotton used as a petticoat.

[114] Lhote has published some very interesting information on the dress of Tuareg women. Thus he mentions that certain women among Sudanese Tuareg wear a kind of shawl over the shoulders instead of a poncho shirt. I have myself seen this garment among pastoral Arabs south of Ayr and close to Aderbissinat, but I have never seen it among the Tuareg. Still more interesting is Lhote's description [567] of a skin skirt worn by slave women among the *Iwllemmeden* (Lhote 1955a, p. 308). This leather skirt, which is laced around the waist by means of a leather cord, is also recorded from the *Bélla* of Timbuktu by Dupuis-Yakouba (cf. Seabrook 1934, p. 251), and some skirts of the same type are conserved in the "Musée de l'homme" in Paris. One skirt among those found in the Paris museum (no. 33.78.9) comes from the Sudanese *Bélla*, and was collected in the region of Arawan by the "Expedition du [294] Hall" in 1945. It is made from several pieces of decorated leather sewn together with leather thread; its total length is about 0.70 m. Another skirt of the same type, but without a museum number, is perhaps of the same origin. In addition to these two skirts the Paris museum possesses three other leather skirts of the same type. They were collected by Lhote in 1939 among Tuareg living in the southwest. One of these skirts is from the *Tengerregif* Tuareg (mus. no. 41.19.845) while the two others [567] come from the *Kel Inteser* (mus. no. 41.19.846 & 847). The skirts are known as *elaraite* according [565] to the museum's card-index, where it is stated that they are worn by slave women, and it is added that similar leather skirts were worn by slave women and poor women of the vassal class among the Ayr Tuareg up to the French o[illegible]

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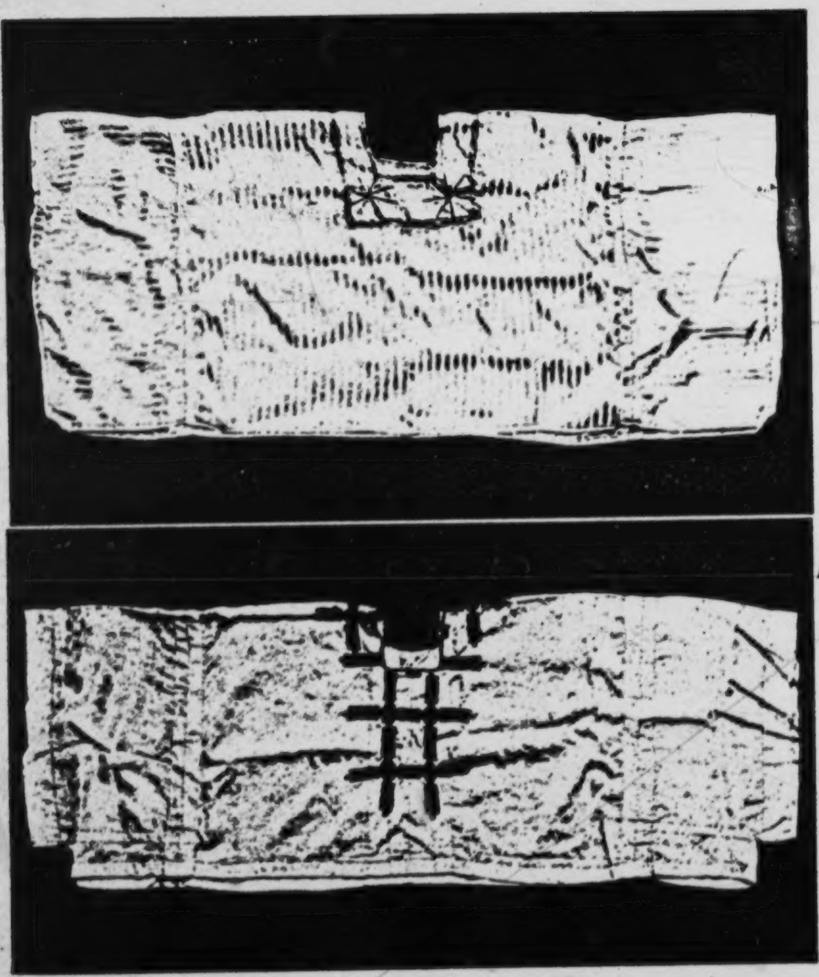

Fig. 239a–b. Two short woman's shirts from Ayr.

a. The shirt (*aftek*) worn by pastoral women. Dimension: 1.27 m. (N.M. G. 6668).

b. Shirt of similar cut but embroidered with red thread. It is called *riga* or *tagua* and is worn by the Hausa-speaking women of Agades. Dimension: 1.38 m. (N.M. G. 6669).

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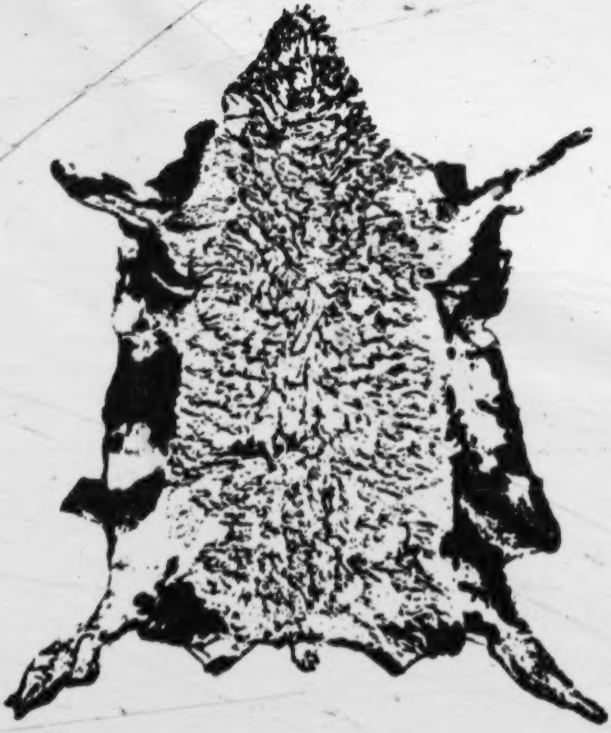

Fig. 240. Sheep-skin (*aflim*) to be worn over the back with the hairy side turning inward in cold weather. Dimension at the middle: 1.170 m long. Ahaggar, the *Aguh-en-tehle* tribe

291 Ayr Tuareg up to the French occupation of Ayr (cf. Musée de l'homme, card-index 41.19.847). The [237] skirts mentioned are made from goat-skin, and this is also the case with two other skirts found in the collection of the Paris museum. These latter skirts differ from those mentioned above in that they

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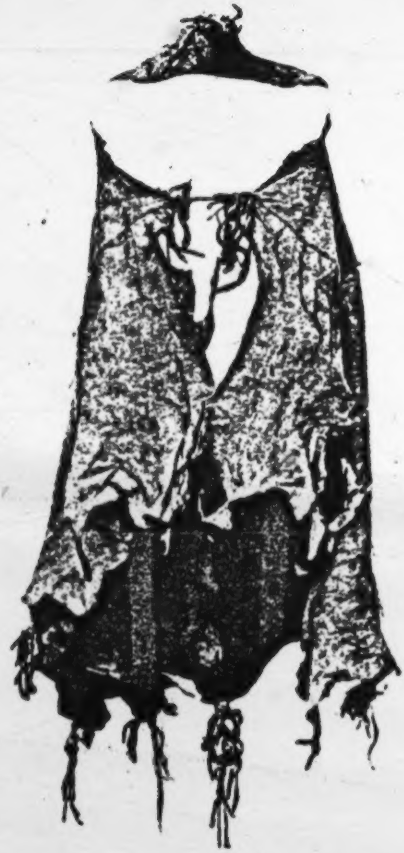

Fig. 241. Skin mantle made from several pieces of hairy goat-skin sewn together with leather thread. It is known as *tiġlemin* (sing. *taġlimt*). Ahaggar, the *Dag Ṛali* tribe. Dimension: 0.99 m without the fringes. (F. M. 281).

are somewhat longer, and provided with two shoulder-straps. The skirts were collected by Lhote in 1939 in the region of Ansongo at the Niger, and derive from the *Kel es Suk* Tuareg. According to the card-index similar skirts are also worn by *Bélla* women of the *Dawssahak* and *Echcherifen* (Musée de 291

291 l'homme, nos. 41.19.1376 & 1377). A skin skirt suspended from the shoulders by means of two leather
straps also occurs among the *Iwllemmeden Kel Ataram* around Meneka and Gao (cf. Nicolas 1950a,
Fig. 38,7 p. 169, p. 176).

292 In case of severe cold a simple hairy skin mantle may be worn by both men and women of the
[232] Northern Tuareg. These mantles are not very common nowadays, when most Tuareg use woollen
[177] blankets introduced from the north, but they are still worn by vassals, slaves, and sedentary agriculturists of Ahaggar. A skin mantle is known as *aġlim* and it frequently consists of a single sheep-
[294] skin worn over the back with hair inside (Fig. 240). But there are also larger mantles composed of
several hairy goat-skin and/or sheep-skin sewn together with leather thread by means of a little awl
(*tistent*). These larger mantles are attached around the upper part of the body by means of a leather
[184] cord around the neck (cf. Fig. 241). Skin mantles are said to be unknown in Ayr, and literature makes
no mention of them in other Tuareg groups.

178 Garments made from skin or leather are nowadays rare among the Tuareg. But the Tuareg, like
291 many other peoples who have given up the use of skin and leather for dress, still use this material
for foot-wear which comprises various types of sandals.

291 The common type of sandal used among the Tuareg is known as *iṛatimen* (sing. *éṛatim*) which
[237] word is also used more generally for sandals of other types. It is made from the hide of oxen and
sometimes of hides of the oryx antelope or giraffe whose hides are considered superior for sandals.
It is not manufactured by the Tuareg but by sedentary peoples of Agadez and other towns in the south.
[438] The Northern Tuareg, like the Tuareg of Ayr, generally procure their sandals from Agadez where
the type is also known by the Hausa word *takelmi*. The manufacture of such sandals is described in
294 detail by Lhote, who states that the untanned hide to be used for soles is treated in the following
281 way:— (1) Beating with wood against a flat stone; (2) Softening in wet sand; (3) Continued beating
with wood against a flat stone; (4) Greasing with butter, tallow, or fatty vegetable substances; (5)
Continued beating in order that the fat may penetrate into the pores of the hide. A sandal is made
from two layers of hide thus prepared and covered with a tanned piece of sheep-skin which is dyed
and decorated. These three layers are sewn together. The sandal is finally provided with a leather
strap to pass between the first and second toes, and this strap again is connected with a broader band
of leather sewn to both sides of the hind part of the sandal so that the band supports the instep (Fig.
[114] 242b). The reader is referred to Lhote's study of sandals for further information about their manu-
291 facture (Lhote 1950d, p. 514 ff.). The *takalmi* sandals are excellent for many purposes: They are
easily pulled off and put on which is advantageous to camel riders who ride bare-footed but frequently
dismount, and then need their sandals put on quickly because of the burning sand and rocks. The
[132] very broad soles of this sandal type is also very advantageous not only as protection against the
burning soil, but also against the numerous acacia thorns lying so to speak everywhere in the river
valleys. But the Tuareg do not wear sandals of this type just because they find them practical and
efficient. They also wear them because they are considered more beautiful in shape and colour than
other sandal types made by the Tuareg themselves. Among the Ayr Tuareg a particular type of sandal
[285] is plaited from dum palm leaves. According to Lhote this plaited sandal is known as *slisleplatine*
(Lhote 1950d, p. 522, Fig. 10 p. 521, pl. XXII Fig. 1). I have never heard it called this, the name]

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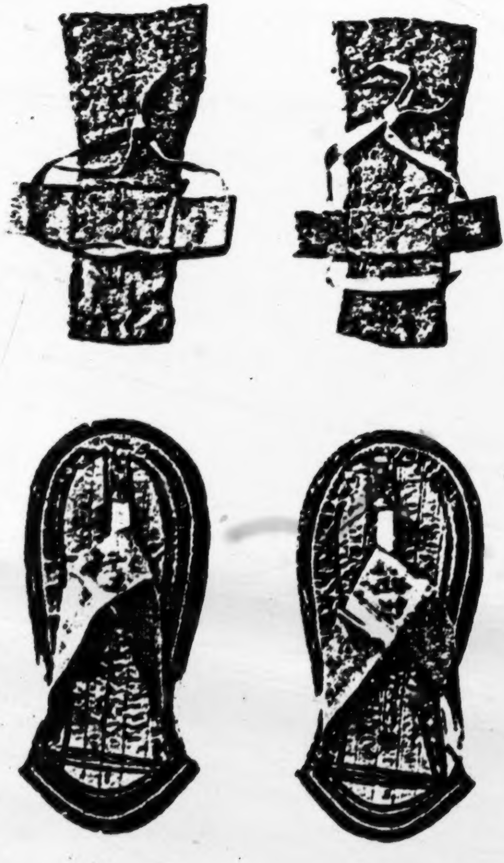

Fig. 242 a-b. Tuareg sandals from Ahaggar

a. Woman's sandals of the *imerkaden* type. Ahaggar, the *Afuh-en-tehlé* tribe. Dimension: 0.224–0.227 m long. (N.M. G. 5277a–b).

b. Woman's sandals of the *ifarim* (*takalmi*) type. Ahaggar, manufactured at Agadez. Dimension: 0.279–0.283 long. (N.M. G. 5278a–b).

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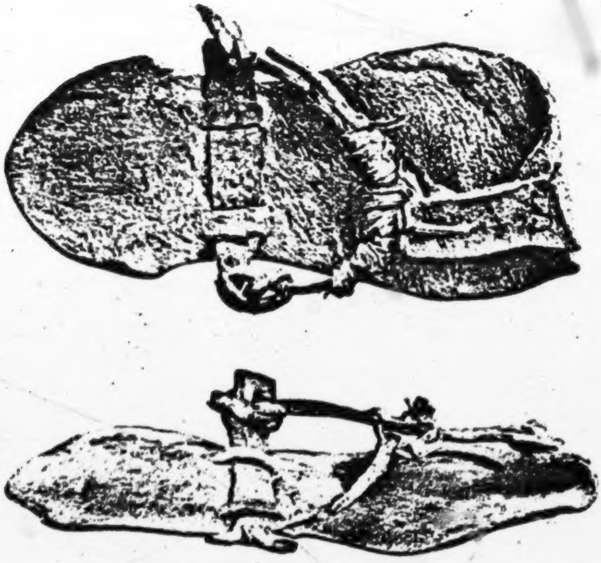

Fig. 243. Sandals resembling the *taglietez* type but having no heel-straps. Ahaggar, Olufsen's collection. Dimension: 0.275–0.285 m long. (N.M. G. 1.8).

have heard being *ėṛatim n tagayt*. It is provided with a strap of leaf passing between the first and second toes, and straps of the same material to support the instep. Thus it is kept to the foot in much the same way as the leather *takalmi* sandal, and there is possibly a historical relationship between the two types. Sandals made from plaiting dum palm leaves wear out rapidly but are quickly made. They are worn mainly by children and by very poor people.

[462] An extremely common type of sandal in Ahaggar is that known as *émerked* (pl. *imerkeden*). These
are never made by professional craftsmen, but are manufactured in Tuareg camps by vassal women
[237] who use the large awl (*éndel*) for sewing sandals. They are made of the tanned skin of sheep and
294 goats, or the skin of oxen if this is available. The sandals, almost rectangular in form, are made from
several layers of tanned skin sewn together with leather thread. At the back of each sandal two leather
loops are inserted in, and sewn to, the leather layers, while a long leather strap is inserted in and sewn
291 to, the fore part. The sandal is kept firmly to the foot by means of the leather strap which passes
between the first and second toes, and through the two leather loops to be fastened over the instep
(cf. Fig. 242a). This sandal type is in high esteem for walking in the mountainous parts of the Ahaggar
Massif, for it is strong, keeps firmly to the foot, and does not easily slide on the rocky surface. It is

It is

never manufactured by noble women, but noble Tuareg obtain this footwear from vassals, or have 291 them made by their slaves. Lhote states that *imerkeden* sandals in the past were more common among [294] the noble Tuareg of Ahaggar (Lhote 1952a, p. 605). *Imerkeden* sandals are very common in Tasilé-n-Ajjer. They are said to be known among the *Kel Ewey* Tuareg under the name *tadakat*. The *Kel Ferwan* Tuareg say that they have a related type, but this I have never seen. The *Kel Ferwan* Tuareg almost exclusively wear sandals of *takalmi* type.

A third main type of sandals is that known to most Tuareg as *tagliezez*. Like other sandal types it [114] is described in detail by Lhote in his study on Tuareg sandals (Lhote 1950d, p. 512–533). Sandals [294] of this type are generally made from one piece of hide or leather which is bent up over the toes. The system of attachment consists of a leather strap attached to the bent-up flap of the sole and passing around the heel through two loops at the back of the sandal. These sandals are extremely common all over the steppes and savannahs of the south, and in Ayr they are used among the *Kel Ewey* and other Tuareg who make them from untanned hide of oxen. In Northern Tuareg country this sandal [184] type is rare and generally not used by pastoral Tuareg who do not manufacture them. However, a pair of sandals resembling this type was brought from Ahaggar to the National Museum of Copenhagen by Olufsen (museum number G 1.8) (Fig. 243). Sandals of *tagliezez* type are nowadays used by many sedentary people of Tamanṛaset in Ahaggar. They are esteemed by Europeans and by Tuareg and Arabs of the camel corps in Northern Tuareg country. But the sandals worn by the last-mentioned people are manufactured by professional craftsmen. The sandals illustrated Fig. 244 were bought at [439] the market of Agadez, but derive from the south – from Sokoto it is said. I have noted their name as *akeroga*. – The type of sandal here called *tagliezez* is known to the Ahaggar Tuareg as *téfedilt* (pl. *tifedilin*) (cf. Foucauld 1951–52, I, p. 304).

A fourth type of sandal is described by Lhote under the name of *éfekil* (pl. *ifekilen*). It is made of a single piece of untanned hide which is treated as described above for the *takalmi* type, and Lhote thinks that this type of sandal, which is common in the south among poor people, is the most primitive type. Lhote believes that the same type occurs also in Ahaggar because the word *éfekil* is mentioned by Foucauld in his dictionary (Lhote 1950d, p. 525 f., Fig. 18). This does not seem to be correct, for [114] the word *éfekil* (pl. *ifekilen*), according to Foucauld, is used synonymously with *émerked* (pl. *imerkeden*) (Foucauld 1951–52, I, p. 313).

Lhote writes that the sandals worn by the Tuareg can be divided into three main types, namely the 291 *ẹratim*, (or *takalmi*), the *émerked*, and the *éfekil*, and that these three types correspond to different 182 types of environment, namely desert, mountain, and steppe (Lhote 1950d, p. 528 f.). Perhaps one should substitute the word *éfekil* with *tagliezez*. There seems to be a certain correspondance between footwear and environment, but it should be added that the distribution of sandal types cannot be explained solely by reference to natural conditions. The *ẹratim* (or *takalmi*) type of sandal, for example, is used throughout Tuareg country from the Sudan to the central and northern parts of the Sahara, an extremely large area comprising great environmental differences. Nor are they suited to all types of desert. They quickly wear out when used on stony ground, and it is very tiring to wear them when walking through deep sand as the broad soles do not bear upon the surface. The *émerked* type of sandal is doubtless the best for walking in mountains, for it is fixed firmly to the foot and its sole of

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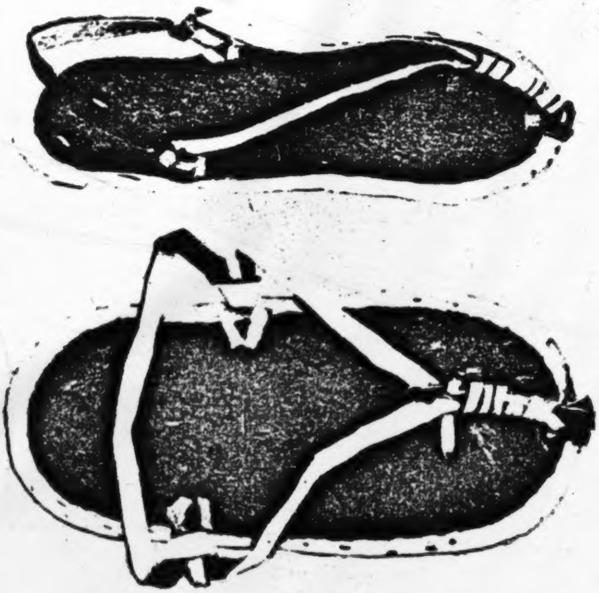

[439] Fig. 244. Sandals known to the Ayr Tuareg as *akeraga*. Bought at Agadez, said to be manufactured at Sokoto in Nigeria. Similar sandals were very common among the *Kel Ataram* Tuareg I saw near Ayoru on the Niger. Dimension: ca. 0.29 m. (N.M. G. 6641).

291 tanned skin does not so easily slide upon the rocks. But sandals of this type are used by a great many
182 Tuareg who do not live in proper mountain areas. The distribution of cultural traits can rarely be explained by mere reference to environmental factors.

292 A most interesting type of footwear, known to the Northern Tuareg and to those of Ayr, is a kind of skin-stocking which is worn with sandals in the winter. I have never myself seen it among the Tuareg and though it has been described in literature published prior to my investigations I failed to enquire
[114] about its use and manufacture. The fact that I have not seen Tuareg skin-stockings does not prove that they are rarely used, for while I have stayed among the Tuareg throughout five summer seasons I have only been among them for one winter, when I mainly lived in the lower parts of the Ahaggar Massif. Most Tuareg I met that winter went barefooted or wore sandals, and those who wanted an extra protection against the cold wore various types of European footwear and stockings.

Lhote describes the skin-stockings (*abuheg̣*) used among the Ahaggar Tuareg as having a very particular cut, so that the first toe is separated from the other toes in order that the stocking may be worn with sandals. The following description of Tuareg skin-stockings is additionally given:— "Cette chaussette monte un peu plus haut que les chaussures européennes à tiges et se lace de même au moyen d'un lacet de peau. Il y a une petite languette et la jonction empeignetige est renforcée par une rondelle de peau fixée par une couture. La semelle est une simple peau de filali qui serait vite usée si l'on marchait directement dessus. *L'abaûheg* est fait en peau de mouton ou en peau de gazelle tannée, et souvent avec des chutes de mauvaise qualité. Les peaux sont ordinairement teintes en noire et la rondelle de renforcement en vert. Mais il y en a aussi qui sont faites en filali rouge de bonne qualité. Le prix de ces dernières est plus élevé et elles sont généralement faites sur commande. On trouve sur le marché d'Agadez, des *iboûhegen* qui sont l'oeuvre des artisans cordonniers de cette ville. Nous n'en avons jamais vu faire chez les Touareg du Nord, qui les font aujourd'hui confectionner par des artisans de Tamanrasset et s'en procurent également à Agadez. De même, nous n'en avons jamais vu porter chez les Ioullimiden de Ménéka ou chez les Tenguéréguifs. Les gens d'In Salah et de Djanet la connaissent ainsi que les Chaamba" (Lhote 1950d, p. 527 f.). According to Lhote, just quoted, *abouheg̣* (*abuheg̣*) is described by Foley not as stockings, but as boots, which form part of the ceremonial equipment of the Ahaggar Tuareg, while Foureau (1894, p. 203) says that wealthy Tuareg among the *Kel Ajjer* wear boots made of soft leather and manufactured at G̣adames, G̣at, and in Ayr. These boots according to Foureau have a separate space for the first toe in order that they may be worn with sandals, and as claimed by Lhote, they are not true boots, but skin-stockings (cf. Lhote 1950d, p. 527 f.). Duveyrier also speaks of the use of soft leather boots known as *ihâhadjen* sometimes worn by chiefs (Duveyrier 1864, p. 407), and in the case of the *Iwllemmeden Kel Dennek* Nicolas mentions the use of a type of boots ("la botte de cavalier") known as *abūzag* (pl. *ibuzāgen*) (Ar. *tmdg*) (Nicolas 1950a p. 174). 292 [237] [822]

Foucauld speaks of *abuheg̣* as a type of soft leather boots, but he mentions that this same word is also used for knitted stocking. Such stocking are also known by the feminine form *tabuhek*, though the proper meaning of this latter word is "slipper". Slippers are worn by a few men and women in winter, and a woman frequently wears them during the period of isolation (4 months and ten days) after her husband's death. According to Foucauld the leather boots (*abuheg̣*) are never worn by women but only by a very few men (cf. Foucauld 1951–52, I, p. 36). It is a great pity that the authors who refer to the use of soft leather boots or stockings have reproduced no illustration which clearly indicates their cut. But fortunately there is a pair of leather stockings in the collection of the Ethnographical Museum at Neuchâtel. There can be little doubt that this garment serves as a stocking and not as a boot, for it has a separate space for the first toe which would be meaningless if not worn with sandals. The leather stocking is made from three pieces of leather:— (1) A sole or rather a bottom piece which is bent slightly up over the foot, notably at the heel; (2) A piece of leather covering the instep and sewn to the forepart of the bottom piece; (3) A piece of leather forming the leg and sewn to the instep and bottom pieces. It is interesting that all three pieces are of the same type of leather and that the bottom piece resembles that of moccasins. [765] [114]

The sort of slipper termed *tabuhek* by Foucauld and worn by both sexes, is identical with leather slippers or shoes provided with a distinct sole. These shoes seem to be of Arab origin, and I have [172]

292 seen them worn by a few Tuareg men in Ahaggar and Tasilé-n-Ajjer. The fact that they are worn by
177 women during their period of isolation after the husband's death, a custom introduced with Islam,
also indicates that these boots are connected with Islamic culture and thus with the Arabs.

[829] The Arabs possess a great religious prestige with the Tuareg, and are responsible for the introduction of many articles of dress among them. Some Northern Tuareg have adopted the Arab *gandura* of kaftan cut as a substitute for their traditional poncho shirt, and many Tuareg nowadays wear the Arab type of headcloth instead of the traditional veil. The burnus (*abernuh*) is also worn by some
[171] Northern Tuareg in winter. This garment is widely used by Berbers and Arabs further north in Northern Africa. It is not traditional to the Tuareg who may have adopted it from contact with the Arabs.

Tuareg Culture, History, and African Culture complexes

In the preceding Chapters I have mentioned most cultural traits connected with Tuareg subsistence
activities. In this Chapter I attempt to view some of these traits in the light of history and the historical 121
theories which have found their expression in the establishment of African culture complexes. I wish
to emphasize at the very beginning that this investigation must omit some important traits of Tuareg
culture as there is no historical information about them and because good descriptions of stock-
breeding techniques are lacking in the case of most pastoralists of Africa and Asia. Consequently it
is very difficult to compare in great detail Tuareg culture with other pastoral cultures.

TUAREG CULTURE AND HISTORY

True historical sources which elucidate the development of African cultures are very scanty and cover 175
only a very short period. We know that most African cultures in recent times have been much influenced 177
by Europeans and their culture, and that some cultures were changed fundamentally at an earlier
period owing to Arab migrations and the introduction of Islam. We know that North Africa during
antiquity was strongly influenced by Romans and Greeks, and still earlier by the Phoenicians. We
possess from North Africa a few valuable written records from olden times and from Egypt we have
earlier historical documents which help us to understand certain aspects of cultural evolution.

The occupation of Ahaggar and Ayr by the French has led to a growing cultural influence from [148]
Islam and the Arabs. Ahaggar was conquered by Arab soldiers under the command of French officers,
and even nowadays a very large number of Arabs serve in the camel patrols of Ahaggar with Tuareg
camel riders. Some of these Arab soldiers marry Tuareg women, and many of them settle in Ahaggar [167]
when they have retired from military service. Other Arabs and Arabic-speaking *Harratin* of Tidikelt
have immigrated after the French occupation of the country. The number of people who speak [192]
Arabic as their mother tongue is not doubt increasing, and Arabic is understood and even spoken [191]
by many Tuareg men though generally unknown to Tuareg women. Added to this, the Arabs have [829]
acquired a high prestige not only on account of Islam but also because Arabic has been adopted as
the main language of the administration in Ahaggar. The officers who act as administrators in Ahaggar
speak and write Arabic while with rare exceptions they do not know the Tuareg language. For all
these reasons certain cultural traits of the Arabs have been introduced into Ahaggar after the French
occupation.

[p.305]

177 Arab cultural traits have played a less important part in Ayr, where there are very few Arabs apart
[162] from the merchants living at Agadez. The Arabs in Ayr, as in Ahaggar, have a certain religious prestige
[186] but I have also heard Tuareg say that they did not like Arabs much because of their bad manners, and mainly because the Arabs talk too much and lack the peculiar type of quiet reservation characteristic of so many Tuareg. It seems as if the French administrators of Ayr have been responsible for the introduction of certain Arab cultural traits, but they have not made Arabic an official language
[191] of the administration. Apart from the marabuts there are very few Ayr Tuareg who have some
[648] knowledge of Arabic. The French administration of Ayr, belonging to the former territory of French West Africa, has led to the immigration of many Sudanese people of negroid type. Clerks and lower
[167] officials working in Agadez have mainly come from Dahomey.

175 The Arabs and Islam came to North Africa at a very early date. The first invasion of Arabs took
177 place in the 7th century A.D. and brought Islam and traits of Oriental town-dwelling civilization into a narrow belt of North Africa along the Mediterranean. There is an Arab tradition according
[173] to which the first followers of Mohammed came to Central Sahara and to the Tuareg as early as the 7th century, but there is also a tradition among the Ahaggar Tuareg saying that Islam was introduced among them by a marabut of the Almoravids (cf. Lhote 1955a, p. 347 f.). It is very possible that certain Tuareg groups of the extreme north were influenced by Islam and the Arabs after the first invasion, but more important was the second invasion of the 11th century when the Northern Sahara was occupied by Arab bedouins from Egypt and, ultimately, from Arabia. This so-called *Hilalian Invasion* comprised various large tribal groups:— (1) the *Beni Sulaim* (or *B. Soliman*) who settled in Egypt, Cyrenaica, Tripolitania, and in the adjacent parts of Algerian Sahara where some of the present *Chamba* Arabs claim descent from this tribal group; (2) the *Beni Hilal* who settled further west in the Sahara south of Algerian and Moroccan Atlas; the important Arab tribe *Ulad Ba Ḥammu* of Tidikelt claim descent from this Hilalian group; (3) the smaller tribal group named *Makil*; this followed the *Beni Hilal* but occupied grazing grounds further west in the desert country of Morocco.
175 These tribal groups largely influenced the Tuareg, and there seems to be little doubt that many Tuareg
648 pastoralists were driven southwards owing to the invasion of Arab nomads, who settled in Tripolitania and the Fezzan. But these Arab pastoralists could not everywhere defeat the pastoral Tuareg. In Ibn Khaldun's day the frontier dividing the Arab bedouins from pastoral Tuareg followed mainly the great belt of sand-hills running from east to west in the Northern Sahara. Now and then the Arabs carried out raids against the Tuareg, but Ibn Khaldun says that the Arab raiders were always attacked by the Tuareg and suffered severe losses (Ibn Khaldun I p. 191, II p. 104 f.). The penetration of Arab pastoral groups into the Central Sahara is outlined by Capot-Rey who states (1) that the Berber tribes inhabiting Tripolitania, Tunisia, and adjacent regions were quickly Arabized, (2) that the Western Tuareg of Mauritania were conquered more recently by the *Makil* Arabs, (3) that elsewhere in the Sahara the Tuareg were not only able to defend most of their territory, but also to assimilate certain Arab tribes (Capot-Rey 1953a, p. 191 f.). This latter statement is correct. Contact between Arabs and Tuareg has also led to the adoption of Tuareg cultural traits by many Arab pastoralists, and even the very powerful Arab tribe, the *Ulad Ba Ḥammu* of Tidikelt, lived in pre-European times very much like the Tuareg in leather tents and dressed like the Tuareg. Various Arab tribes of the Sudan

are also very akin to the Tuareg in culture, but have preserved some Arab traits of material culture 175
and their traditional social organization in addition to their language, though they also know *tamachek*. 648
We are here concerned only with traits adopted into Tuareg culture from contact with the Arabs.

In the description of Tuareg culture I have already pointed out many cultural traits due to Arab 177
influence. I have mentioned such traits in connection with food-preparation (p. 232, 237 ff, 247 ff) and
dress (p. 303 f.). I have also mentioned the introduction of cultivation methods and cultivated plants
owing to contact with Arabs and the Arabic-speaking *Ḥarratin* (p. 186 ff.), and I have stated that
it seems as if new types or new breeds of domestic animals were introduced to North Africa by the
invading Arabs. Cats and domestic pigeons seem to be post-Arabian in the Sahara (p. 115 f.), the true
grey-hound came to Tuareg country with the Arabs, who also introduced the particular horse-breed
known as the *Aryen* type (p. 113). Doutressoulle relates a native tradition to the effect that this
breed came to the Begzen Mountains with Arabs of Tripolitania (Doutressoulle 1947, p. 238 f., 242).
Horses of this breed are introduced to Ayr from the north even to-day, but as far as I know the Ayr 492
Tuareg and the Hausa-speaking *Imeggedezen* do not use the Arab type of saddle or the very broad
stirrups typical of the northern horse-riding Arabs. They generally use very narrow stirrups for the
insertion of one or two toes. These stirrups were possibly introduced to the Western Sudan with the
Dongolawi breed. It came from Upper Egypt at the end for the 13th century A.D. when the *Djoheyna*
Arabs immigrated (Mauny 1961, p. 283).

I have mentioned above (p. 54 ff.) that there are two main types of camels among the Northern 233
Tuareg:— (1) a northern Arab breed (*marroki*) characterized by heavy stature and a thick covering
of wool, and (2) a southern breed more slenderly built and with little or no wool – a breed which is
typical to the Tuareg. Medieval Arab authors have stated that the Tuareg possessed camels of a particular 175
breed well fitted for riding (Ibn Khaldun II, p. 70, 105; Edrisi, p. 11, 67 f., 144 f.; Leo Africanus
p. 940 f.). The division of camels into two distinct types of the above characteristics can be traced 233
elsewhere in Northern Africa, where the heavy woolly breed is found mainly in the north and particularly 171
among Arabs, while the slender non-woolly breed is common among such pastoralists as the
Tuareg, the Moors of Mauretania (who are largely of Tuareg stock and have a great many Berber
words in their camel vocabulary, according to Monteil 1952), the Tebu, and the Beja tribes around
the Nile (cf. Cauvet 1925, I, p. 79 ff.; Doutressoulle 1947, p. 272 ff.; Nachtigal 1879, I, p. 415 f.;
Murray 1935, p. 92 ff.). The distinction between the two main types cannot apparently be explained
by the different environmental conditions, for they frequently live within the same type of environment,
and the northern *marroki* type is found particularly among Arabs, and not only among the
Arabs of the northern desert. *Marroki*-like camels seem to exist among such Arab tribes as the *Kunta*
and the *Berabich* north of the Niger Bend in the Azawad desert (Doutressoulle 1947, p. 273), among
the camel-breeding Arabs of the Lake Tchad region, and among Arab pastoralists of the former
Anglo-Egyptian Sudan – particularly among the Kababish (Cauvet 1925–26, I, p. 80 ff., 83 f.). There
seem to be little doubt that the *marroki* camel came to North Africa with the Arabs and it is then 174
natural to investigate whether they also introduced particular cultural traits connected with camel-breeding.
It is relatively easy to take up such an investigation with reference to particular saddle 127
types, because they are frequently described and depicted in literature.

492 The large saddles for women (*akhawi*, *tkhawit*, *araġen*) (p. 88 f.) were most probably introduced
[177] by Arab pastoralists. These saddles are not known among all Tuareg. In the Northern Tuareg groups they are used in the noble class (*Ihaggaren*), in the *Iseḳḳemaren* class, which seems to have relationship with Arabs (p. 10, 398 f.), and in the *Ireġenaten* tribe which lives in Tamesna though it belongs to the group of Ahaggar Tuareg. Its members claim to descend patrilineally from Arabs, matrineally from noble Tuareg. Large women's saddles are also found among the Tuareg of Adṛaṛ-n-Foṛas, and there is a saddle of the *akhawi* type from this group in the ethnographical collection of the Neuchâtel Museum (no. 49.2.35). Women's saddles are also common among the *Iwllemmeden Kel Dennek*. They are described by Nicolas who mentions two types. One named *tahâwit* is perhaps constructionally different from the saddles of the north, while the other type termed *aruku* is constructionally related to riding saddles in Ahaggar, but is without the large wooden side-arches characteristic of certain northern saddles. However, saddles having arches like this are found among the *Deremchaka* Arabs who live in *Kel Dennek* territory (Nicolas 1950a, p. 178 Fig. 47a & e, pl. X p. 177). Light women's saddles resembling the Ahaggar *tkhawit* saddle without side-arches and known as *akhawi* was seen in the camp of the noble *Kel Tahabanat* Tuareg near Ayoru. Here I was told that the wooden structure is always manufactured by blacksmiths while its cover of ochre-coloured leather is made by Tuareg women who also make the little *afezu* mat placed over the structure and serving for seat. Such saddles
[565] are found only in noble tribes of the *Western Iwllemmeden*, never among vassals. Women's saddles are unknown in Ayr where the Tuareg build a riding saddle upon large cushions (cf. p. 90), and they are apparently also unknown among the *Kel Geres*. The Ayr Tuareg speak of riding saddles known as *akhawi* or *tkhawit* as "Arab saddles", and these terms are also derived from Arabic. Lhote states that he has not seen the richly-decorated saddles known as *akhawi* outside of Ahaggar (Lhote 1947a, p. 142). Thus it seems that proper women's saddles have a limited distribution among the Tuareg. They occur mainly in certain classes of the Northern Tuareg, the *Kel Adṛaṛ*, and the *Iwllemmeden*.
492 In these areas they are apparently also used by Arabs. Somewhat related women's saddles are found
171 among the Tebu. These saddles are described by Le Coeur who states that they are normally bought in Kanem (Le Coeur 1950, p. 60, 126). I think that this may perhaps indicate their origin as this region and adjacent parts of the Lake Tchad plains have a population of pastoralists of Arab descent. Various types of women's saddles occur among all Arab pastoralists of North Africa and the Arab peninsula – possibly with the exception of certain bedouin tribes of South-eastern Arabia. I do not know whether these saddles occur among the Beja, the Danakil, and the Somali. They are not mentioned in the literature I have consulted.

492 The pack saddle known as *tebeyut* or *tkhawit* (p. 76, Fig. 57) is not very common among the Northern Tuareg. It is unknown among the *Kel Ayr* and so far as I know also among the *Kel Geres*. It seems to be unknown also among the *Iwllemmeden Kel Dennek* where the same structure is used as a women's saddle as mentioned above (Nicolas 1950a, p. 178 Fig. 47e). I do not know if this saddle type occurs
492 in other Tuareg groups. It is found in the Lake Tchad region and Chudeau considers it typical of the
171 sahelian zone (Chudeau 1909, p. 206; Capot-Rey 1946, p. 163). It is also mentioned by Nachtigal as the typical type of saddle of the Tebu (Nachtigal 1879, I, p. 457), while the Tebu saddle described by Le Coeur and now preserved in the Musée de l'homme (no. 32.50.4) is slightly different from the

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saddle depicted by Nachtigal the fore and the aft trees being connected by two horizontal or oblique sticks instead of two crossed sticks at each side (Le Coeur 1950, p. 175). This saddle type is also depicted from the Tebu by Moberg and Fuchs (Moberg 1953, p. 192; Fuchs 1961, p. 39), and I have myself seen a saddle like this among camel-owning Fulani at Niamey on the Niger. A related saddle type with fore and aft trees at each side connected with two horizontal sticks, is depicted by Heuglin from North-east Africa (Heuglin 1877, I, p. 26). It is perhaps the common saddle type in and around the Beja country.

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The saddle corresponding to the *tebeyut* or *tkhawit* type of the Northern Tuareg is known by the Arabic word *basur* among the Tebu (Nachtigal 1879, I, p. 457), while among the Arabs of North Africa the word *basur* is generally used for women's saddles of the same fundamental construction. Pack saddles of *tebeyut* or *tkhawit* type are known to the Arabs of Algeria as *ḫerej*. However, such saddles do not seem to be common among Arabs of Algeria, where I have never seen them, though they are probably used by Arabs of Upper Egypt and in Sinai (cf. Murray 1935, p. 116).

In Arabia saddles constructionally resembling the *tebeyut* or *tkhawit* type are extremely common. They are used as pack-saddles and also for riding. There seem to be three distinct Arabic names for them:— (1) a sadle known as *sdad* (or *shadad*) and characterized by particularly high pommels; it is used mainly as a riding saddle (cf. Boucheman 1934, p. 35 ff., Fig. 9–11; Musil 1928b, p. 350 ff., Figs. 37, 44; Euting 1906, p. 394 ff., ill. p. 393, 397; Dickson 1949, p. 84 ff.) (2) a saddle known as *misame* constructionally of the same type, but having no high pommels; it is very much like the *tebeyut* or *tkhawit* type described from the Northern Tuareg (cf. Boucheman 1934, p. 61 f., Fig. 23; Musil 1928b, p. 354, Fig. 41; Dickson 1949, p. 84 ff.) (3) a saddle known as *rabit* of very much the same type as the *misame* saddle but of a somewhat heavier construction (cf. Musil 1928b, p. 354; Euting 1906, p. 398, ill. p. 394). The two last mentioned saddles are mainly pack-saddles but they are also used for riding. The distribution of the saddle types *sdad*, *misame* or *rabit* in Arabia seems to be as follows:—

The Syrian Desert; the tribes *Sba'a* and *Rawala* (cf. Boucheman 1934 & Musil 1928b quoted above).
Hedjaz; *sdad* (Musil 1926, Figs. 30, 84, 85, etc.).
Negd; *sdad* (Musil 1928a, Figs. 8, 22, 28, 62, 63); *misame* or *rabit* (Musil 1928a, Fig. 15).
Irak; *sdad* (Musil 1927b, Figs. 1, 19, 33, etc.).
Kuweit; *misame* or *rabit* (Raunkiær 1913, Fig. 21; Dickson 1949 quoted above).
South Arabia; *sdad*; the tribes of *Murra*, *Sa'ar*, and *Harab*. Riding saddles of the *sdad* type are not found east of Dhufar (Thomas 1932, p. 268).

It would appear that a riding saddle of the *sdad* type is depicted in a 9th century B.C. relief at Tell Halaf (cf. Dostal 1958, p. 2, pl. I Fig. 2).

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The common pack-saddle among the Northern Tuareg is the *elaki* (cf. p. 74 f., Fig. 55). This saddle type, as mentioned, is not made by the Tuareg themselves, but normally by sedentary *Ḫarratin* of Tidikelt where palm material is abundant, more rarely by blacksmiths who make the construction of wood, and not from the ribs of date palms. The *elaki* is the common saddle type all

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25
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The élaki is the common saddle type all

B 492 171 over the northern desert inhabited by Arabs. It is known to Algerian Arabs as *ḥawiyya*, the word also used in Tripolitania where the type is extremely common (cf. Nachtigal 1879, I, p. 457). Saddles of entirely identical types occur among the Moors of Mauretania (Monteil 1952, p. 92), among Arabs of Upper Egypt (Klunzinger 1878, p. 206, Fig. 11; Murray 1935, p. 116), and in the Egyptian Sudan (Marno 1874, p. 207). Further east it seems to be in use among most, perhaps all, Arabs:— Sinai (Murray 1935, p. 116), Syrian Desert (*Sba'a* and *Rewala*) (Boucheman 1934; Musil 1928b), Hedjas (Musil 1926, Figs. 9, 15, 30, 59, 84), Negd (Musil 1928a, Fig. 66), Irak (Musil 1927b, Fig. 40). These Arabs generally call the saddle *ḥedâğe*. It is perhaps common to all Arabs including those of Southern Arabia. However, the *ḥedâğe* or *ḥawiyya* is not mentioned from Kuweit by Dickson, who describes from this region a peculiar saddle of somewhat related type used mainly for riding and having Oman as its homeland. The saddle is named *al fulani*; it consists of a pair of miniature saddle arches fixed in front of the animal's hump by means of a girth, and a cylindrical straw-stuffed mattress which is placed over the back behind the hump and fastened to the little saddle-frame with cords (Dickson 1949, p. 87). The same type of riding saddle is depicted by Thesiger from Oman and adjacent parts of South Arabia (Thesiger 1959, Fig. 12 p. 33), and Mr. Klaus Ferdinand has informed me that he has seen only this type of riding saddle around Qatar. It would seem natural to derive the *al fulani* riding saddle from a pack saddle of *ḥawiyya* or *ḥedâğe* type the more so because riding saddles for camels B [114] and horses seem frequently to have developed from saddles used for transportation. Dostal's theory that the riding saddle of *al fulani* type is very ancient and constitutes the proto-type of other Arabian saddles is very queer (cf. Dostal 1958, p. 2 ff.). In North-west Africa there is a peculiar type of pack-saddle which resembles the *ḥawiyya* or *ḥedâğe* saddles. It consists of two curved pieces of wood united by broad side-boards and by two small sticks inserted into holes at the upper part of the curved arches. This saddle-frame is placed before the camel's hump and is fixed to two pieces of plaited mattresses. Saddles of this kind are found in the Musée de l'homme in Paris from the borderland of Algeria and Morocco (no. 38.180.80), from the Regeibat of Northern Mauritania (no. 38.133.6), and from the *Ida w Aich* Moors around Tidjika of Southern Mauretania (no. 38.136.58) (cf. Monteil 1952, p. 92).

T 492 Saddles of the *ḥawiyya* or *ḥedâğe* type (*élaki* to the Northern Tuareg) seem to be unknown to the Southern Tuareg. The proper pack-saddle used among the Ayr Tuareg is that called *aruki*, consisting of one curved piece attached to two flat side-boards by means of which the whole structure is attached to two pads or mat cylinders fitted each side of the camel (cf. p. 76). This very simple wooden structure is found not only in Ayr but also among the *Iwllemmeden Kel Dennek* (cf. Nicolas 1950a, Fig. 47 f, p. 178). Nicolas also depicts two other simple wooden structures for pack-saddles. One of them consists of two pieces of wood lashed together at the upper and narrow ends, the broader lower ends being attached to pads or mats; the other one is of similar type but is made from one single piece of wood – probably from a heavy forked stick (Nicolas 1950a, Figs. 47g & h, p. 178). A saddle consisting of an angular piece of wood like that just mentioned, but attached to two flat sideboards, is in the Musée d'Ethnographie of Neuchâtel (no. 48.2.63); it is manufactured in the Sudan within the Tuareg area.

T [177] The *élaki* saddle of the Northern Tuareg is probably an Arab culture trait. It occurs among the

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Tuareg where influence from Arab material culture is particular strong, and it is structurally identical with the Arab pack-saddle known as *ḥawiyya* or *ḥedâğe*. The origin of the pack-saddle called *aruki* among the Southern Tuareg is not easily determined. It may perhaps constitute a late type which developed from a pack-saddle with two curved or angular trees in front of the camel's hump. This may be true of some *aruki*-like saddles. But certain pack-saddles of *aruki* type may perhaps have originated from a kind of split wood similar to that used for camels by the Somali of Tana River (cf. Ahlefeldt 1948, ill. p. 137).

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There are other traits of camel breeding that have apparently been introduced among the Tuareg through contact with the Arabs. This may be true of the looped rope (*asaṛun*) connected with a little stick for attachment around the camel's foreleg (p. 72 ff., Fig. 45a). This device is unknown among the Ayr Tuareg though common among the Northern Tuareg who often make it of camel's wool. It seems to be known among most, perhaps all, Arabs, who manufacture it from the same material. Among the Ababde and the Bisharin it is plaited from dum palm material (cf. Sleesen-Dolk 1957, p. 12, Figs. 28–30). It is most probably an Arab trait which also seems to be Cauvet's opinion (Cauvet 1925–26, I, p. 554 & pl. LXII, p. 555).

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We may perhaps also mention the large woven transportation bags which are extremely common among all North African Arab pastoralists, while unknown among the Tuareg. But small plaited or woven bags of goat hair mixed with camel's wool are manufactured in Ahaggar by women of certain tribes (p. 266 f, Fig. 209a–b) .These bags are known as *tiṛrar* (sing. *téṛerirt*) which seems to be derived from Arabic (cf. Foucauld 1951–52, IV, p. 1776 & Cauvet 1925–26, I, p. 711). The small loading sticks *tihḍaḍ* (sing. *téheḍiṭ*) (p. 76) used to unite the two halves of a camel load are perhaps also Arab in origin for this particular word is apparently also derived from Arabic (cf. Foucauld 1951–52, II, p. 520 & Cauvet 1925–26, I, p. 711).

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The origin of other traits of camel-breeding is not so easy to determine, but it is very possible that the plaited pouch which among the Northern Tuareg constitutes the normal method to prevent camel calves from sucking (p. 62, Figs. 41–42) was also introduced by the Arabs. This device is unknown among the Ayr Tuareg and apparently also among the *Kel Geres*. It is found among the *Iwllemmeden Kel Ataram* (*abegu*) and is recorded in literature from the *Kel Dennek* (Nicolas 1950a, p. 141), and from the Moors (cf. Monteil 1952, p. 71). It is widely found among all pastoral Arabs of Northern Africa and of the Arabian Peninsula.

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As to the use of camel brands produced by burning with a redhot iron it seems difficult to judge from distributions the origin of this method. These brands are known among most Tuareg with the exception of the *Kel Ferwan* and other Tuareg of Ayr, who use earmarks cut with a knife. Earmarks seem to be used for camels also among the Moors (cf. Monteil 1952, p. 103) and were apparently used in ancient Arabia (cf. Cauvet 1925–26, I, p. 298). One might perhaps assume that earmarks constitute an older type of proprietry marks, while brands came later. But information about marks and brands is scarce.

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The origin of many traits of camel-breeding cannot be determined, but it is not be doubted that the Arabs have introduced into North Africa a particular breed of camel together with certain saddles and objects connected with the use of the camel as a pack animal. There is also no doubt that these

233 177 traits are found among the Northern Tuareg and partly among the *Iwllemmeden*, while they have not generally been adopted by the *Kel Ayr* and the *Kel Geres*. It is most interesting in this connection that when they wish to speed up their riding camels the Northern Tuareg use a sound identical with that used among the Arabs, while the Tuareg of Ayr use a very different signal (p. 136).

The Arabs only partially influenced Tuareg camel-breeding, for this was well-established in North
233 171 Africa before the Arab invasions. There is no doubt that certain traits of camel-breeding are known to most pastoralists who breed the one-humped camel. Such traits may well have been introduced to North Africa with the Arabs, but they were most probably also known to North Africa camel-breeders before the Arabs arrived. Among such traits universally known to camel-breeders, th[illegible]ng can be mentioned:—

Milking with the dummy-calf. This seems to be practised among all Arab pastoralists of the Peninsula; it is frequently described, in modern literature about this area, and is mentioned as well in ancient Arabic poetry (cf. Cauvet 1925–26, I, p. 355). The custom is known to Arabs of the Sahara and, according to Monteil, also to the Moors (cf. Monteil 1952, p. 72). I have mentioned above that the dummy-calf is used for milking camels among the Northern Tuareg and in Ayr, and according to Nicolas the custom is also practised among the *Iwllemmeden Kel Dennek* (Nicolas 1950a, p. 140).

Perhaps a milking method universally known is that of patting the udder. I have recorded this method from Ahaggar, from Ayr (p. 57), and from Arab pastoralists of the Sahara (e.g. the *Ulad Ba Ḥammu* and the *Chamba*). I have not been able to find much information about this method in literature, but it is possibly this to which Thesiger refers in his description of camel milking in Southern Arabia (cf. Thesiger 1959, p. 145).

A method of which there is also very little information is that of weaning calves by cutting them on the bridge of the nose in two or three places. I have noted it from the *Kel Ahaggar*, the *Kel Ajjer*, and the *Kel Ayr* and from pastoralists of Arab tribes such as the *Ulad Ba Ḥammu*, but have not seen it among Arabs in the borderlands of the Atlas and the Sahara. I have also noted the existence of this particular method among the *Kel Tahabanat* of the *Western Iwllemmeden*, but it is not mentioned by Nicolas from the *Iwllemmeden Kel Denek*, though he states that it is known among the *Kunta* (Nicolas 1950a, p. 141). In certain parts of North Africa a cut on the bridge of the nose of camel calves is given one or two thorns. These sting the mother camel when the calf tries to suck and the mother camel therefore kicks the calf away. The method is described from In Salah by Cauvet, while Nicolas mentions it from certain Arabs and *Ifoṛas* Tuareg (Cauvet 1925–26, I, p. 359; Nicolas 1950a, [illegible]). A related method is known to pastoralists of Arabia where a little pointed stick is tied to the head of the calf to prevent it from sucking (cf. Cauvet 1925–26, I, p. 359).

261 171 A very interesting custom, perhaps also a very ancient one, is that of using the blood of living camels for food. Among the Tuareg, blood of living camels is drunk only when water is lacking during camel expeditions in the desert (cf. p. 235). The bleeding of camels to utilize their blood is also practiced among the Tebu (Huard & Charpin 1960, p. 195), and among the bedouins of Arabia it seems as though camel's blood is consumed regularly for food. Doughty describes how Arab bedouins boil camel's meat in broth and blood, as they are unaware that the Ḳoran forbids the use of blood for food (Doughty ed. 1926, I, p. 561). A good description of the use of blood of living camels as food among

Arab bedouins is given by Finbert:— "Dans les jours de disette, on pulvérise les ossements de la 261
carcasse, et bien que l'Islam interdise l'usage du sang, on l'y mêle en le recueillant d'une veine que 171
l'on ouvre à un chameau. De ce mélange on fait une pâtée que l'on dévore. En cas de famine prolongée, on mange de la corne moulue avec des trayons macérés dans du sang. Le sang lui-même, toujours pris sur l'animal vivant, est versé dans des boyaux qui sont ensuite grillés comme du boudin" (Finbert 1938, p. 39). It is very possible that the custom of bleeding live animals for food has once been widely known among many people of the area now dominated by Islam; thus Ibn Batutah mentions a Turanian people among whom blood of live horses is used for food (Ibn Batutah III, p. 24).

Among the Tuareg a certain medical value is attached to camel's urine (p. 127), but they do not 237
wash in it as do many Arab bedouins of the Peninsula. A conception of camel's urine as something 171
clean seems to exist among many camel-breeders, and Thesiger mentions that bedouins of Southern Arabia wash their hands in camel's urine before milking (Thesiger 1959, p. 145).

It is evident that some traits of camel-breeding resemble customs known also to African cattle- 233
breeders, and it seems as if these customs are widely found among people who breed one-humped 171
camels. – Certain traits of camel-breeding are peculiar to the Tuareg and a few adjacent peoples.

In contrast to all other camel breeding peoples the Tuareg and some adjacent peoples have riding 492
saddles that they place in front of the camel's hump (p. 78 ff.). The common saddles are those known 171
as *térik*, comprising the two main types named *tamzak* and *tekokeyt*, the most developed riding saddles among the Tuareg. These saddles are also used by some of the Northern Arabs, notably the *Ulad Ba Ḥammu* and the *Chamba* who import them from Southern Tuareg country – particularly from Agadez where the best saddles are made. The *térik* saddles with a cruciformed pommel are quite peculiar to the Tuareg.

The Tuareg saddle known as *ahyas* or *tahyast* (Fig. 63) resembles the *térik* type in that it is also placed in front of the camel's hump, so that camels are ridden in exactly the same manner as with *térik*-saddles. The *ahyas* type is not mentioned from the *Kel Dennek* Tuareg. But it is extremely common among the *Western Iwllemmeḍen* and is said to have originated in Aḍraṛ-n-Foṛas. Further west among the Moors, a riding saddle somewhat resembling the *ahyas* type seems to form the common type. It differs from the *ahyas* mainly in that it has a very low pommel and a very broad and deep seat. Several specimens of this Moorish saddle type are found in the Musée de l'homme in Paris (e.g., nos. D. 33.24.14 & 34.76.15). These Moorish saddles are placed in front of the hump like all Tuareg riding saddles, but I have been told that owing to their peculiar structure the riders cannot generally reach the camel's neck with their feet, so that they ride more bumpily and less steadily than the Tuareg, who secure their position by stemming their naked feet against the camel's neck. This is also seen from photographs of camel riders from Mauretania (cf. Puigaudeau 1945, ill. p. 128–129).

The *térik* and *ahyas* saddles are always made by blacksmiths, and this is probably also the case [564]
with the Moorish riding saddles. But as mentioned above (p. 82 ff.) the Tuareg of Ayr make certain primitive riding saddles themselves, and these, called *kantarki* or *delobi*, are perhaps the prototypes of the more developed saddles made by the blacksmiths. Tuareg riding saddles for camels do not seem to have been introduced to Africa by the Arabs of the Peninsula where such saddles are unknown. The use of a single rein attached to a metal ring fixed in the right nostril of the riding camel is perhaps

492 171 an ancient North African custom. It is the method generally applied by the Tuareg and those Northern Arabs who use saddles of the *térik* or *tahyast* types; it is also practiced among the Moors of Mauretania (cf. Monteil 1952, Puigaudeau 1945, ill. p. 128–129), and is known to the Tebu (Cline 1950, p. 34). It would appear that the use of nostril rings for riding camels has much the same distribution in North Africa as have saddles of *térik* or *tahyast* types including the Moorish saddle, which is also placed in front of the animal's hump.

The Tuareg halter made of iron or metal shackles and used in connection with the nostril ring so that the camel is controlled by means of a double rein (*akeskabbu*; cf. p. 73, Fig. 50–52), is perhaps a combination of two originally different systems, for the Tebu use this peculiar halter without any attachment to a nostril ring, the camel being controlled by a single rein combined with the halter (cf. Le Coeur 1950, p. 133, pl. XXIX Figs. 111–112 & Cline 1950, p. 34).

136 174 114 Much has been written on the history of the camel in North Africa, and I do not want to take up this question in great detail as I can add very little to what is already known. René Basset's theory that the camel was first introduced by Arabs of the first invasion (Basset 1907) is contrary to all historical information, for we know with certainty that the camel was known to the Berbers before the Arabs arrived. Contemporary with Basset it was pointed out by Flammand, that skeletal remains of camels from North Africa proved the exsistence of these animals as early as "les temps quaternaire moyens" (Flammand 1907). But while Flammand states that the camel disappeared with a more humid climate, Cauvet later tried to substantiate the theory that the camel did not disappear, but continued to exist further south in Africa. Thus, he claims, the southern camel-breed descends from the ancient camel found in Africa even during the mio-pliocene of the tertiary period, while the northern breed was introduced by the Arabs (cf. Cauvet 1925–26, I, p. 15 ff.). I can agree with Cauvet's latter statement regarding a connection between northern camels and the Arabs, but his theory of the existence of the one-humped camel in Africa since tertiary time is most difficult to accept. The camel breed which existed in Africa prior to the Arab invasions was no doubt comparatively recently introduced from Asia. Barth pointed out that the camel came to North-western Africa about the beginning of the Christian era (Barth 1849, I, p. 3 ff.). This theory has later been supported by many scholars, notably by Gautier (Gautier 1928, p. 99 f., ed. 1946, p. 129 ff.; 1942, p. 190 ff.). Quite recently the various problems connected with the history of the camel in North Africa have been re-examined by Walz. He largely accepts Barth's theory of its introduction in antiquity, but also points out that the camel, which seems to appear in Egypt about 500 B.C. or somewhat earlier, may have been introduced to southern parts of Africa via the Bab-el-Mandeb Straits at an earlier date (Walz 1951, p. 29–51; 1954, p. 45–87).

Gautier states that the Romans had a certain responsibility for the introduction of the camel into
North-Africa, though he also claims that it was introduced by the Berber-speaking *Zenata* tribes
174 (Gautier 1942, p. 209 f., 227). It is to be doubted that the Romans introduced the camel into North-
177 Africa, and on the whole it seems as if the Romans have influenced Tuareg culture very slightly. It
is difficult to point to any definite traits of material culture taken over from the Romans, though
Foucauld states that certain lamps of Roman form are found in Tasilé-n-Ajjer (Foucauld 1951–52,
III, p. 1399). A fair number of Latin words can be proved to exist in Tuareg dialects. This fact is

frequently referred to in books, and some authors have taken certain linguistic Roman traits as a 174
proof that the Tuareg have once been Christians. But as stated by Lhote, the Latin words adopted 177
in the Tuareg language cannot by themselves prove an ancient Tuareg Christianity, though they do indicate that the ancient Tuareg have had direct or indirect contact with Christians (Lhote 1955a, p. 346). We know that Christianity had a fixed position among many Berbers of North-Africa (cf. Ibn Khaldun I, p. 177, 207, 209 & Leo Africanus I, p. 163), and there seem to have lived Christian Berbers more than a hundred years after the introduction of Islam into Morocco, where certain Berbers near Fez still remember Sunday as a day of rest (cf. Westermarck 1926, I, p. 13 f.). As to the Tuareg we do not know whether some of them have been Christians, but Ibn Khaldun states that the great western division of *Sanhaja* Tuareg never adopted Christianity (Ibn Khaldun I, p. 212).

The Phoenicians occupied a limited area of the North African coast where they remained from about 1200 B.C. until the end of the third Punic War in the year 146 B.C. Over this long period they apparently did much to change North African Berber cultures. They introduced the use of iron and bronze, new cultivation methods of wine and olive, and did much to open up North Africa to Mediterranean influences, which also penetrated into the country of the Berber chiefs (cf. Gsell 1920–28, IV, p. 18 ff., 74 ff.; Despois 1949, p. 177 ff.; Mauny 1952, p. 577). However, it does not seem that true Phoenician elements can be proved to exist among the Tuareg. Further back in time true historical knowledge stops, but Aegean influences seem to have been in Tunis before the Phoenicians (Gsell 1920–28, I, p. 347; Despois 1949, p. 117).

TUAREG CULTURE AND AFRICAN CULTURE COMPLEXES

So-called historical anthropology was from its very beginning closely connected with studies of 121
African cultures. It was inaugurated by Friedrich Ratzel as a reaction against Adolf Bastian's evolutionary theories. Ratzel pointed out that certain weapons were found in identical form in Africa, Asia, and Oceania and he claimed that this could be explained only from the assumption that a historical relationship existed between them. Already in his study of the African bow Ratzel gave as his opinion that "Fast ganz Afrika erscheint uns zuletzt als ein einziges grosses Gebiet mehr oder weniger abgeschwächter asiatischer Anklänge" (Ratzel 1891, p. 333).

Ratzel had many followers who took up distributional studies of cultural traits in Africa and adjacent regions. Important investigations were made by such scholars as Schurtz and Weule, and by Leo Frobenius, who established a particular West African culture complex, which he claimed was historically related to similar compilations of culture traits in Indonesia and Melanesia (Frobenius 1898a). It is remarkable that Frobenius very soon abandoned this method of historical reconstruction though he invented it himself. However, the concept of world-embracing culture complexes disappeared, only to emerge again in a modified form a few years later (1904), when the two German scholars F. Graebner and B. Ankermann compared their studies in Oceania and Africa to establish for these areas culture complexes which they claimed to be historically related (Graebner & Ankermann 1905). The principal supporter of this theory was Graebner, who deepened his methodological

121 viewpoints in a particular book on the subject (Graebner 1911). A later contribution was made by Wilhelm Schmidt who classified all cultures into world-embracing culture complexes based mainly upon social characteristics, therein differing from the culture complexes established by Graebner (cf. Schmidt & Koppers 1924, p. 75 ff.; Schmidt 1937).

The establishment of world wide culture complexes has been of some value for our knowledge of cultural evolution in Africa. But scholars who have adhered to this particular method of historical reconstruction have committed many fallacies, not only because they recognized no other scientific approach but the study of distributions, but also because they were so convinced about a relationship between all cultures that they did not take the trouble to produce evidence of their theories about historical connections.

The methodological approach concerned with the establishment of culture complexes within the African continent was also founded by Leo Frobenius. In 1904, when Graebner and Ankermann established their culture complexes for Oceania and Afrika, Frobenius claimed that he now dissociated himself from this method which he had himself created. From then on he was concerned almost exclusively with the study of African cultures. He firmly believed that most African cultures had been introduced from outside, and he tried to show how these foreign influences had penetrated into the continent. He did this not only by means of distributional studies, but tried to demonstrate how certain trait-distributions should be explained in the light of archaeological finds in African coastal regions. By this method Frobenius established certain culture complexes to which he added two particular cultures which could not be explained in this way. The cultures that could not be explained in the light of archaeological finds he termed "Urkulturen", and he named them the "Ethiopian Culture" and the "Hamitic Culture". Frobenius has written on African cultural developments in numerous books and articles. His method and his culture complexes are best described in "Atlas Africanus" I-VIII, 1920 ff., and in "Kulturgeschichte Afrikas", 1933. His culture complexes are the following:— 113

(1) *The Ethiopian Culture*. A primitive culture ("Urkultur") which constitutes the foundation of many cultures of tropical Africa.

(2) *The Hamitic Culture*. A primitive culture ("Urkultur") mainly represented among pastoralists of North and East Africa.

(3) *The Atlantic Culture*. A high culture which came from the Mediterranean, through the Straits of Gibraltar, along the North-west African coast, and settled around the Guinea Coast where there are numerous ruins and archaeological finds.

(4) *The Syrtic Culture*. A high culture which influenced a large part of North-western Africa. It came from the Mediterranean and reached as far south as Senegal – Niger – Tchad – Benue. The Garamantes played an important part in the spreading of this culture.

(5) *The North Erytrean Culture*. A high culture connected with certain North-east African states, notably Axum and the old Kuchitic states in and around Ethiopia. From these regions the culture spread over the Sudan and adjacent regions. But the traits of this culture complex are not limited to any definite period.

(6) *The South Erytrean Culture*. A high culture which like its northern counterpart came from the

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Near East. It was brought across the sea and along the East African coast by a foreign people who settled in the region between Limpopo and Zambezi. It is connected with ancient ruins, notably with those of Zimbabwe. 121

There are many extremely weak points in these culture complexes.

The so-called Ethiopian and Hamitic cultures are nothing more than accidental groupings of cultural traits, and the Atlantic culture seems to be a compilation of traits, which did not come to West Africa from the sea in the way Frobenius thought. When all this has been said, it must be admitted that he started a valuable work. For his *Syrtic Culture* and the two *Erytrean Cultures* were founded upon a realistic methodological principle entirely new to African historical anthropology, namely the combination of distributional studies with archaeology.

Frobenius had many followers, who have contributed much to advance his theories (cf. Lagercrantz 1950, p. 7 f.), but since Frobenius no scholar has been of such importance for the establishment of African culture complexes as has Hermann Baumann. He acknowledges the value of some cultures established by Frobenius, and in an early paper he states that the culture complexes of Africa should be elucidated mainly by studies within the continent. Culture complexes should be intra-continental, and not inter-continental (Baumann 1934). As early as 1927 Baumann outlined some of his culture complexes in a study of the Azande and the Mangbetu (Baumann 1927), and the year after he published an important paper on the division of work in African hoe culture, in which paper he stressed the importance of social organization for the establishment of culture complexes (Baumann 1928). Baumann has published other significant papers on various aspects of African cultures, but his main work is "Völkerkunde von Afrika" (1940), in which book he has outlined his view on the historical development of African cultures. They are divided into the following culture complexes:— 113

(1) *The Pygmy Culture.* This is limited to the parts of Central Africa, where the Pygmies live. The culture is founded upon hunting and collecting and is very poor in material objects.

(2) *The Eurafrican Steppe-hunting Culture.* A primitive hunting culture which is represented mainly among the Bushmen though it can be traced over a large part of the African continent in the steppe and savannah regions.

The so-called "Mahalbi" Culture established by Frobenius at the outskirts of the Sahara (cf. Frobenius 1933, p. 70 ff.) is incorporated in the Eurafrican Steppe-hunting Culture, which is not limited to any particular ethnic group. It is found among khoisanid and negroid peoples alike, and in part it is represented among ethiopid and even europid tribal groups. However, it is considered likely that this particular culture in its origin was linked with people of the khoisanid race, which seems to have existed over most of the African continent in the remote past. This hunting culture seems to have been of great importance to people of the Sahara which appears from rock engravings representing hunting scenes, and traits of the Eurafrican Steppe-hunting Culture were found among the Ancient Libyans of Northern Africa. The Eurafrican Steppe-hunting Culture, and also the khoisanid race, seem to be connected prehistorically with the Wilton- and Smithfield Cultures of South Africa, the Elementeita Culture in Kenya, the Capsian Culture of North Africa, and perhaps also with the well-known rock engravings of Eastern Spain. Characteristic of the Eurafrican hunting culture are particular hunting rites and hunting methods (hunting in disguise by means of animal masks, poi-

/21/ soning of waterplaces, throwing clubs and throwing sticks, the spiked wheel-trap, poisoned arrows placed in the nests of ostriches, hunting by wounding the Achilles tendon of game animals, the running down of gazelle by hunters). Among the weapons of this culture should also be mentioned the sling, and particular types of bows and arrows. The digging stick provided with a heavy stone is typical of the culture to which collecting is of prominent importance. The penis case has a certain connection with hunting and is also considered part of the Eurafrican culture in which women wear leather skirts and a leather garment over the upper part of the body much like women amog then Eastern Hamites. The typical dwelling is the beehive hut, or a windscreen. Social organization is characterized by the hunting groups within which the individual family has a rather independent position. Religion and spiritual culture comprise the belief in a supreme being, primitive toteism, animatism, and sun worship.

(3) *The East Hamitic Culture*. This pastoral culture is best preserved in the regions of the East African Horn and in South-West Africa. The complex is mainly attached to cattle of the long-horned type. The fat-tailed sheep is also esteemed while the agricultural animals, goats and fowls, are lacking. A particular type of greyhound apparently also belongs to this culture complex, which has many peculiar traits attached to stock-breeding:— Cattle are killed only at feasts and ceremonies, the urine and the excrements of cattle are considered clean, cattle urine employed for cleaning milking bowls and the like, milking bowls are predominantly made of wood while bowls made from clay or metal must not be used, milk and water must not be mixed, women must not engage in the tasks of cattle-breeding, there is a particular connection between chiefs and cattle, there is a myth stating that people and cattle have a common origin, milk should be tasted by somebody before it is drunk by the milker, butter is churned in calabashes or skin-bags to be used exclusively for ointment, the constant fire lit to protect cattle against insects which are considered disease-carrying demons, the scape-goat, a peculiar pastoral type of totemism (cattle totems and split totems), ear-marks, decorations burned into the animals' hide with a red-hot iron, horn deformations, blood-drinking and eating of raw meat, the dummy calf, blowing into the cow's vulva to promote milk yielding, divination by means of entrails, the use of coiled basketry, the use of subterranean storerooms, and the fat woman as an ideal of beauty. The East Hamitic Culture is further characterized by beehive huts covered with boughs, mats, dung, or skin; by the leather mantle which is frequently tied up over one of the shoulders, and the leather loin-cloth worn by men while woman's dress consists of a leather skirt frequently ornamented with beads. The typical weapons are the spear and the shield made of hide. There is a strict war-organization attached to this culture in which metal techniques are traditionally unknown, and blacksmiths are looked down upon and not recognized as forming part of society. The important social characteristic is the inheritance right of eldest son within the patrilineal group. As to religion, the culture complex possess many characteristics of hunting cultures.

(4) *The West African Culture*. This falls into two parts, namely the northern *Rain Forest Culture*, and the southern *Matrilineal Bantu Culture*.

(5) *The Old Sudanese Culture*. A patrilineal farming culture mainly preserved in isolated parts of the Sudan. The men engage in the heavy agricultural work connected with shifting cultivation in the Savannah country. The important agricultural implement is the slot-shafted hoe, that is the hoe hafted

by means of a tongue inserted in the wooden handle, but the digging stick is also known. The typical 121
type of dwelling is the cylindrical house with a conical roof.

(6) *The Young Sudanese Culture*. This is largely identical with the *North Erytrean Culture* established by Frobenius. Its main area of distribution lies between the Senegal River and the Red Sea around Ethiopia, and its culture elements derive from Arabia, Syria, Mesopotamia, and above all from India. It is attached to state organization characterized by divine kingship, and many traits of highly-developed techniques in crafts are particularly attached to the royal court. It is a most refined culture in comparison with the above mentioned *Old Sudanese Culture*. Its original foundation was perhaps a developed agricultural technique based on artificial irrigation, manuring, and the terracing of fields. Certain agricultural implements are also characteristic of this culture complex, notably the socket-shafted hoe and other implements hafted in this way, the sickle, particular knives for rice-harvesting, and crescent-shaped spades. Megalithic monuments are perhaps also peculiar to this culture.

(7) *The Rhodesian Culture*. This is largely identical with the *South Erytrean Culture* established by Frobenius, and has many traits in common with the *Young Sudanese Culture*, notably state organizations characterized by divine kingship. Many other cultural traits are common to the two cultures.

(8) *The Old Mediterranean Culture*. This is largely identical with the *Syrtic Culture* established by Frobenius. It is a high culture, which has been introduced from the Mediterranean into a large part of the Western Sudan between the Senegal River and Lake Tchad. It is less prominent in other parts of the Sudan. It is characterized by the mother-right of the Berbers, and this social trait derives from the old Aegean-Iberian culture of the Mediterranean. Mother-right was introduced into the Western Sudan together with the invasion of fair-skinned Berbers whose racial traits can be traced in numerous chief-families of West Sudanese states. The ancient mother-right of the Berbers even reached the Gold and Ivory Coasts. In the north it disappeared in most places, but was conserved among the isolated Tuareg and the Beja. Many developed cultural traits are considered part of the Old Mediterranean Culture, but as this culture in the Sudan has mixed with the Young Sudanese Culture it is often difficult to determine whether cultural elements of the Western Sudan have been introduced from the east or from the north. An important characteristic of the Old Mediterranean culture is clay or mud architecture, including huts and store rooms of cylindrical form with a conical roof, dome-shaped dwellings, drums made from clay, large earthen jars for storing cereals, painted pottery, refined leather work, stone-carving, the manufacture of beads and glass, etc.

Many scholars other than those mentioned have contributed to our understanding of African cultural development, but none has made so systematic a study as has Baumann. More recently, however, a most important work on the distribution of African cultural traits has been published by
Sture Lagercrantz. This deepens our knowledge of African cultures by its distribution maps, founded [113]
upon an enormous knowledge of African literature (Lagercrantz 1950). Lagercrantz follows Baumann in the establishment of culture complexes, stating that the results achieved by Baumann are likely on the whole to prove of permanent value (Lagercrantz 1950, p. 8). In what follows I attempt to elucidate certain aspects of Tuareg culture in the light of Baumann's African culture complexes.

There can be no doubt that in the past an *Old Mediterranean Culture*, or a *Syrtic Culture*, has greatly 174
influenced North Africa with related regions. I think that the influence from such a high culture in

174 the regions now inhabited by the Tuareg is very clearly schown by the excellent study made by Lhote on rock engravings and paintings of horse-drawn waggons and carts in the Sahara (Lhote 1953a). For it is demonstrated by Lhote that though these pictures may show a resemblance to Egyptian carts and harnesses they are more particularly related to those of Ancient Greece, which is also intimated by the artistic style and the occurrence of spiral motives. The most excellent representations of horse-drawn carts have been found in and around Tasilé-n-Ajjer, but pictures are also known from the Fezzan around the ancient city of Garama, in Ahaggar, Adɼaɼ-n-Foɼas, and in parts of Mauretania. Further east in the Sahara, in Ayr and in Tibesti, no cart pictures have so far been found. Lhote thinks it possible that horse-drawn carts may have been used on a route connecting the ancient city of Garama with the city of Tademaket (Es Suk) in Adɼaɼ-n-Foɼas, though he admits that the mere representation of carts in rock pictures does not necessarily prove that they were used in regions where such pictures are found. For rock pictures representing carts may also be found in mountainous regions where cart-driving has no doubt been impossible, though the cart used by the ancient people of the Sahara was probably a light one (Lhote 1953a, p. 1138–1228).

It would be natural to investigate how far this *Old Mediterranean Culture* has influenced Tuareg 212 culture. We may then perhaps assume that Tuareg alphabet (*tifinaɼ*) is a so-called *Old Mediterranean* element though it has not yet been exactly shown to which other alphabet *tifinaɼ* is most directly related (cf. Lhote 1955a, p. 174 ff.). It is more difficult still to prove other cultural traits among modern Tuareg to be Old Mediterranean. One might suppose that a high culture of North Africa with a centre of gravity in the Syrtic region would also have influenced the ancestors of the Tuareg in regard to dress and weapons. It is of some interest to note that the bi-triangular persons depicted in Ancient Crete are also characteristic of the rock-engravings in the Sahara, whether associated with carts or not. Rodd has stated as his opinion that there is a close relationship between these bi-triangular figures in rock engravings and the leather shirt of poncho type still used by isolated tribes among the Ahaggar Tuareg (Rodd 1938, p. 101 ff.). But, as pointed out by Lhote, there is no obvious reason to connect this ancient type of dress with Mediterranean civilizations, and the dress worn by persons depicted during the cart-period does not correspond to any definite type (cf. Lhote 1953a, p. 1148 ff.).

It would not be unnatural to expect that Tuareg culture would have adopted the sword from the Old Mediterranean culture which, we know, was found in North Africa long before the advent of Islam. But while spear warriors mounted on camels and horses are frequently depicted in ancient rock-engravings there seem to be little evidence of the ancient use of the sword (cf. Huard 1960, p. 144). Many theories have been advanced about the origin in Africa of the sword with a cross-like hilt (cf. Ankermann 1905, p. 60; Schilde 1929, p. 172; Murray 1935, p. 101). These authors give various explanations, but they all believe that the sword was introduced comparatively recently. Gsell states that the sword was not common among North African Berbers until the 6th century A.D., and he believes that the particular Tuareg sword with a cross-like hilt was introduced to the Sahara from Spain with the Almoravides during the 11th century A.D. (Gsell 1920–28, VI, p. 44 f.). Baumann asigns the sword to the so-called Young Sudanese Culture, to which complex Tuareg armdaggers are credited by Lagercrantz (cf. Lagercrantz 1938a; 1950; p. 206 ff.). The developed techniques of leatherwork and skin-dyeing are perhaps to be considered Old Mediterranean rather than Young Sudanese?

The cotton shirt of poncho cut (p. 289 ff.) is common to all Tuareg, and is widely found in North- 174
western Africa among the Moors as well as among the Hausa and other sedentary peoples of the 171
Sudan where I have seen it as far south as Accra and Abidjan. It is unknown to Berber-speaking tribes of the Atlas, though an almost identical type of garment is found among the Berbers of Siwa (Cline 1936, p. 31). Poncho shirts very akin to those used among the Tuareg are also found in the Fezzan, Tibesti, Borku, and Bornu (cf. Nachtigal 1879, I, p. 97, 189, 455 f., 646; Cline 1950, p. 40; Le Coeur 1950, p. 126, pl. XXVIII & XXXIV). It is possibly also this shirt to which Lebeuf refers from the Teda-Daza, from Kanem and Ouadai, and from the Arabs of the Lake Tchad region (Lebeuf 1959, p. 24, 44, 87, 97).

The large poncho-shirts used in North-western Africa were no doubt introduced before Islam, 174
and it is possible that we should class them with the so-called *Young Sudanese Culture* comprising refined cultural traits derived from the Near East including Egypt, and from India, for we note that the same type of garment was used among the Iranians of antiquity (cf. Birket-Smith 1948, p. 279). To the same culture complex should perhaps also be referred Tuareg sandals of the *takalmi* type which are largely used in the Sudan, and were known also in Ancient Egypt (cf. Chasseloup-Laubat 1938, p. 42, pl. XXIXa–c & Lhote 1950d, p. 528 ff.). The same is perhaps also true of sandals plaited of dum palm leaves and structurally related to *takalmi* sandals (cf. Zeltner 1914a, p. 367).

If we follow Baumann's definition of the Young Sudanese Culture there are other traits than those alluded to above which should perhaps be classified with this complex. Thus we note in particular socket-shafted implements and weapons, notably spears and adzes, while the normal axe, as well as the hoe among the sedentary *Kel Ayr*, are slot-shafted. The latter principle is considered a part of the so-called *Old Sudanese Culture* characterized by shifting cultivation with little developed agricultural techniques in contrast to the Young Sudanese Culture, which in its origin was perhaps connected with irrigation, terrace-building, and fertilizing. It is probable that we have conserved in Ayr certain traits of an old negroid culture based on shifting cultivation, and in this connection we note that the Ayr farmers do not harvest by means of the sickle, which by Baumann is also considered a Young Sudanese trait.

So far we have dealt with African Culture complexes that apparently have had very little importance 121
for the creation of Tuareg culture as we know it to-day. More important are the last two complexes to be mentioned, namely the East Hamitic Culture and the Eurafrican Steppe-hunting Culture. The Hamitic Culture established by Frobenius seems to contain traits from both complexes, and it is very possible that Frobenius in working out his Hamitic Culture was much influenced by Seligman's Old Hamitic Culture which has been recognized by many scholars (cf. Lagercrantz 1950, p. 6 f.).

Baumann's *East Hamitic Culture* constitutes the most reasonable culture complex among all 174
cultural groupings, for it contains traits which are largely connected with cattle and which seem to have very little meaning without. The East Hamitic Culture in many ways seem to constitute a true unit of traits that have penetrated into Africa with cattle. However, we must emphasize that it is not a functional unit in the sense that all these traits are highly necessary for cattle-breeding, and it is very evident that all traits are not found where the so-called East Hamitic Culture occurs. Bau- 171
mann finds the East Hamitic Culture particularly well preserved in the Beja group, among the Danakil,

171 the Somali, and certain Galla, among the Nilo-Hamites and the Bahima, and in South-western Africa among such tribes as the Hottentots, the Herero, the Ovimbu, and others. The complex is mixed with other cultures among neighbouring Bantu-speaking peoples of southern Africa, and among the Nilotes. He states that the Fulani of the Western Sudan are culturally related to the East Hamites, but their historical origin is rather obscure. He also points out that certain traits of the East Hamitic complex are found among Arabs of the Eastern Sudan as far as Lake Tchad, where non-humped cattle of the *Bos primigenius* type seem to occur. Many authors have dealt with the distribution of the so-called East Hamitic traits, and Lagercrantz has published some very detailed maps of the distribution of certain milking customs of the East Hamitic complex (Lagercrantz 1950, p. 44 ff.). The traits mentioned by Lagercrantz have a larger distribution in Northern Africa than appears from his valuable maps. Thus the distribution of milking by inflating is indicated as practised in parts of South, East, and North-east Africa, and also in the Eastern Sudan, but it is not mentioned from the Sahara or from the Western Sudan. I have noted it among the Ayr Tuareg, and it is probably known elsewhere in the Western Sudan. Milking with the dummy-calf is shown to have a somewhat larger distribution. For North-western Africa it is mentioned among the Fulani of the Western Sudan, and in the Canary Islands. I can add that the method is common among the Ayr Tuareg, the *Kel Adɣaɣ* and probably also other groups of Sudanese Tuareg, and I have noted it also in Kabylia, from which region it has been earlier mentioned by Hanoteau and Letourneux in their large monograph on the Kabyle (Hanoteau & Letourneux 1893, I, p. 497). It can be added that it seems as though this custom is known to most camel-breeders of the Sahara and the Sudan. Milking by udder patting is shown by Lagercrantz to exist almost exclusively in South-west Africa, though there is one instance of this method being used among the Nuer. I can add that this method is applied among the Ayr Tuareg, and among the Tuareg of Ayr, Ahaggar, and adjacent Arab tribes it is used also for milking camels. Finally, with regard to blood-letting with spears or knives, Lagercrantz mentions this custom only in the case of certain peoples of the Lower Congo region, a few instances from the Nilotes and East Africa, the Hottentots and the Ayr Tuareg. We can confirm the occurrence among the Ayr Tuareg, and add that blood-letting also occurs among the Tebu, and perhaps among many other pastoral people of the desert. Other so-called East Hamitic traits have not been distributionally studied in great detail, but I believe that there are other resemblances between the so-called East Hamitic Culture and the culture of North-west African pastoralists, including that of the Tuareg, e.g., the custom of not drinking milk alone when the animals graze away from camp, the small knots carved into the bridge of a calf's nose to prevent sucking, a custom used among the Tuareg for both cattle and camels, and which has been mentioned from the Nilo-Hamites by Huntingford (verbal information). In other words we find that the bulk of East Hamitic cattle traits are found also in North-western Africa among the Tuareg, with the main exception that they do not use urine added to milk or for the cleaning of milking bowls. However, this custom is known in the Western Sudan. I have been told that it is done by the Fulani in the region south of Ayr (cf. also Dupire 1962, p. 87).

174 The distinction between pastoral North Hamites and pastoral East Hamites is not so great as is often believed. A great many usages are common to the two branches of pastoral Hamites, and one might ask if the milking customs found among the Tuareg and adjacent pastoralists do not derive

from an ancient cow-breeding culture. This we know formerly existed in the Sahara where cows are 174
very frequently represented in rock-engravings. There can be little doubt that hump-less long-horned cattle of the *Bos primigenius* type, which are still found in isolated parts of the Western Sudan, once existed in the Sahara, and it is extremely remarkable that Huard has been able to show that horn-deformation like those practised in Ancient Egypt on *Bos primigenius* cattle, and those still practised on oxen among the Nilotes, can be proved to have been in use over most of the Sahara, where such deformation is frequently seen on ancient cattle-pictures. It may be that one or two of his examples are doubtful, but on the whole they seem to be reliably interpreted, and I think with Huard that we should take the rock-engravings of the Sahara as a proof that the so-called East Hamitic Culture was formerly represented all over North-west Africa (cf. Huard 1953, p. 75–106, and notably 1959, p. 109–131). Long-horned cattle seem to have been found among the Ancient Libyans (cf. Bates 1914, p. 96), who according to Baumann also possessed traits in common with the East Hamitic Culture. We do not know when the nomads of the Sahara stopped to breed long-horned and humpless cattle, [173]
but the Ayr Tuareg, who are now zebu-breeders, claim that cattle-breeding is not an ancient occupation among them. They seem to hold that cattle were rare in Ayr even as recently as up to the beginning of the French penetration, and they claim that they know less about cattle than about other domestic animals. They also have rather few cattle terms compared with the extensive glossary for other domestic animals. It might be contended that the milking customs of modern Tuareg are derived from an ancient cattle-breeding culture of the Sahara but in general this is not the whole explanation, for it seems as if some of these traits have been introduced or re-introduced into the Sahara with camel-breeding, which originated in the same area from which the East Hamitic Complex must have come to Africa.

Our last problem is to consider Tuareg culture in the light of the so-called *Eurafrican Steppe-* [121]
Hunting Culture, which Baumann believes to have existed over most of Africa. He finds remains of this culture among the Ancient Libyans, and he thinks that certain rock-engravings of the Sahara prove that this primitive hunting culture was once widely distributed in the desert, while at present the steppe-hunting culture is mainly preserved on the outskirts of the Sahara. It seems as if the Tuareg have very few elements which can be placed within this culture. They lack the bow and arrow and also [411]
the true throwing stick or throwing club, they do not use parts of animals for disguise, and they do [224]
not poison water places to kill game, though in pre-European times they killed their enemies in this way. They know the spiked wheel-trap stated by Baumann to be an Eurafrican trait, but I believe with Lindblom and Lagercrantz that this hunting device is not so ancient (Lindblom 1928; Lagercrantz 1950, p. 98), and it can be mentioned in this connection that the torsion traps are also comparatively late arrivals (Lagercrantz 1950, p. 103 ff.; Lips 1927, p. 271). This may be the case also with dog hunting as practised to-day, for greyhound-like dogs are probably not the oldest hunting dog. Hunting barbary sheep with dogs and spears is depicted in a rock-engraving near Ṛat (cf. Frobenius 1933, pl. 28a), but, as generally the case with rock-engravings, it cannot be dated. A type of greyhound was known already in prehistoric Egypt (cf. Adametz 1920, p. 86 ff.; Antonius 1922, p. 124 ff.) which may perhaps also be considered the cradle of Tuareg greyhound-like dogs, while the true greyhound, or *sluki*, was introduced to North Africa by the Arabs. The use of stalking animals is most

probably not an old hunting trait. Lagercrantz thinks that it came into Africa with an early Hamitic migration (Lagercrantz 1950, p. 97 f.), and I believe myself that the origin of this usage should be looked for in a culture which already knew stock-breeding. I believe this to be the case also with lassos and throwing snares, though the so-called short throwing snares according to Lagercrantz originated within the so-called Old Sudanese Culture (cf. Lindblom 1939, p. 386–393 & Lagercrantz 1950, p. 173 ff.). It seems to me that we have no evidence for the assumption that lassos and throwing snares are old hunting weapons, for these implements occur mainly among peoples who are also stock-breeders. As to the use of such implements among the Tuareg, we see that the pulling snare and also the throwing snare, used in connection with a short stick, are both employed mainly for catching domestic animals which have run wild. It remains to mention the sling, which is considered by Baumann to be an ancient hunting weapon of the Eurafrican hunting culture. The sling has later been studied in detail by Lagercrantz, who finds it in use over large areas of Africa, but mainly in East Africa, North-east Africa, and in the Western Sudan, though it is also noted in South Africa and in North Africa (Egypt, the Fezzan, the Atlas countries, the Canary Islands). We cannot be sure, according to Lagercrantz, that the sling in Africa everywhere derives from the same source. It was known by Eurafrican Steppe-hunters who made their slings of leather, but it has been re-introduced by various other immigrants such as the Hamites and the Arabs (Lagercrantz 1950, p. 214 ff.). The antiquity of the sling seems to be proved by its existence in distinct hunting cultures of all continents with exception of Australia (cf. Birket-Smith 1948, p. 206 f.). We see that though the origin of the sling possibly reaches back to very primitive hunting cultures, there is little evidence that among the Tuareg it belongs to such a culture (cf. p. 170).

Finally I mention the Tuareg use of a stick provided with an iron crook for catching lizzards in holes (cf. p. 162). It is interesting to note that the Bushmen catch burrowing animals, such as the spring hare (jerboa) and anteater, in their holes by means of a long stick with a barb or crook. This is stated by Schapera (1930, p. 133) and a crooked implement of this type deriving from the Bushmen is found in the Ethnographical Collection of the Danish National Museum. However, the distribution of this particular hunting implement in Africa seems to be unknown. One cannot, of course, take it as a proof of cultural connections between Tuareg and Bushmen.

Altogether, we have some difficulty in finding the so-called Eurafrican Steppe-Hunting Culture among the Tuareg. But there can be little doubt that traits of some ancient hunting culture are preserved among them; we have evidence of this in certain rituals connected with hunting, and some of the sub-areas of tribal teritories are true hunting territories (cf. p. 148 f.). This points towards hunting as an important means of subsistence to the Tuareg in the past, and there can be little doubt that the same may be said of collecting. For though wild plants play a little part in Tuareg nourishment nowadays, the plants utilized for food belong to many different species, some of which are protected to allow them to grow ripe for collecting, which is generally done by methods unknown among agriculturists with the exception that the *tullult*-grass (*Aristida pungens*) is cut with a sickle. We may perhaps also see a rudiment of ancient collecting in the use of the digging stick by vassal women of Ahaggar. More than anything else I believe that the ancient remains of hunting and collecting are proved by the existence among the Tuareg of very primitive methods of food-preparation. Cooking

174 with hot stones, which is still used for certain dishes, constituted in the past a very important method of food preparation being used for milk, meat, and for vegetable dishes alike. Also an ancient implement is perhaps the quern-stone, though it has to be admitted that it occurs throughout the world in many farming cultures. Tuareg dishes known as *tébik* and *téderka* (cf. p. 175 ff., 251) should doubtless be considered very ancient, and this is probably also the case with Tuareg method of bread-baking which is different from the methods used among most North African farmers. Bread is frequently baked from wild seeds, and it is not made from true dough but rather from a kind of gruel to be baked according to the *abatul*-method.

171 The existence among the Tuareg of leather garments of simple poncho type is of particular interest, the more so as such shirts are extremely rare in Africa. In literature they seem to be mentioned only in the case of the Tebu, and there is a well-preserved shirt from this people in the Museé de l'homme (Paris). It is made of the skin of barbary sheep, and is sewn together at both sides, but the upper parts of the sides are left open to form very large and wide arm-holes; patches of leather with ornamented fringes are sewn to the shoulders to form a kind of open sleeves. This skin shirt, which resembles that of the Ahaggar Tuareg, is said to be worn by blacksmiths (Musée de l'homme, no 35.50.107). Le Coeur mentions leather shirts from the Tebu stating that they are but little used nowadays:— "Seuls les hommes de condition servile le portent encore". He provides a photograph showing a Tebu blacksmith in a long skin shirt which has a kind of open sleeves attached to the shoulders (Le Coeur 1950, p. 100, pl. XXXIII Fig. 124). Leather shirts are mentioned from Central Tibesti by Fuchs, who depicts a shirt of this kind which is now in the Museum für Völkerkunde in Vienna (Fuchs 1961, p. 23 f., Fig. 7 p. 24). Lebeuf says that among the Tebu, skin shirts are worn mainly by the Aza who make them from antelope skin, but they are also found among the Danoa of Kanem. These two peoples, the Aza and the Danoa, are related to each other. They never live in villages, but are roaming hunters who use the bow and arrow but mainly hunt by driving animals against cords. The Aza form small sections and are attached to the nomadic Daza as a kind of vassals (cf. Lebeuf 1959, p. 9, 16, 24, 39, 44). The origin of these peoples is uncertain. They seem to constitute remnants of an ancient hunting population.

174 Tuareg garments of leather or skin are in general of simple form and cut, and most probably constitute types of early dress development. This is perhaps also true of sandals of the *imerkeden* type, and perhaps even of skin stockings. If this be so it is very remarkable that we find among the Tuareg a poncho shirt of very primitive cut together with sandals and stockings, for we know from Hatt's brilliant analysis of arctic dress development that the oldest complex of skin garments in Arctic Eurasia and America – the so-called "Sandal System" – consists of (1) Clothing developed from the poncho type; (2) Breeches developed from leggings, in some cases probably from leggings combined with a triangular genital cloth; (3) Boots and shoes developed from stocking and sandals (cf. Hatt 1914, p. 214 ff. 1934, p. 2755 ff.).

121 [114] I think that this brief description of Tuareg culture in the light of African culture complexes can adequately be concluded as follows:— Most of Baumann's cultural groupings have little value for an analysis of the historical development of Tuareg culture. His classifications are often too vaguely defined, and he does not always substantiate his theories by archaeological facts. The so-called Old

12 Mediterranean and Young Sudanese Cultures seem to be cultural influences from distinct regions throughout extremely long periods.

The study of geographical distributions combined with archaeological investigations constitutes a highly important method for the reconstruction of cultural history. But cultural traits should also be studied structurally in great detail within limited areas, and one should take into account the native traditions concerning origin. I attempt to elucidate this in the following chapters on dwelling types, political systems, and social organization.

Tuareg Dwelling Types

There are many distinct dwelling types within the extended territory dominated by the Tuareg. The occurrence of all these types within this area definitely cannot be explained by mere reference to anthropo-geographical factors for they rather indicate that cultural influences from the outside have been numerous. 342* [121]

In this description of the dwelling types in the Tuareg country I consider it proper to open with various types of fixed or non-portable dwellings which are used mainly by sedentary people, though sometimes also by pastoralists. In another section of this chapter I describe the true portable dwellings of the pastoral Tuareg.

A. NON-PORTABLE DWELLINGS

There seem to be nine main types, namely the following:—

A.1. Square or rectangular houses built of mud.
A.2. Square or rectangular houses built of mud and stone.
A.3. Square or rectangular houses built of stone.
A.4. Subterranean or semi-subterranean houses.
A.5. Square or rectangular huts (houses) covered with plant material.
A.6. Round houses with a conical roof.
A.7. Conical huts.
A.8. Beehive huts.
A.9. Barrel-vaulted huts.

Within these main groups there are certain sub-types. The way the non-portable dwellings have been listed does not indicate any evolutionary tie between them for there can be little doubt that most types within Tuareg country have their own history.

A.1. *Square or rectangular houses built of mud.* 342* 171

Houses of this type have an extremely large distribution in Northern Africa. They are found in most oases of the Sahara, and are common in the large Sudanese towns or cities including Agadez. They are also found north of the true desert country. I have seen them up to the foot of the Tell Atlas around Boghari, where they frequently have saddle roofs which was the case also with certain

[text continues on p.329]

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*342
[443]
[531]

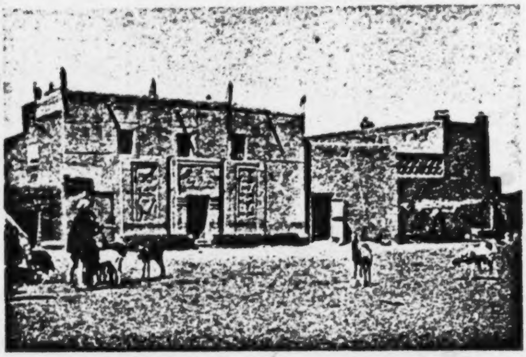

Fig. 245. Decorated house of Sudanese type at the market place of Agadez.

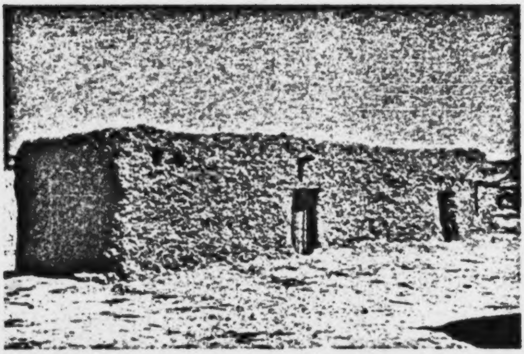

Fig. 246. House (*tarajamt*) built of mud and stones which are covered by a mud plaster. Ayr, Awderas.

[356]

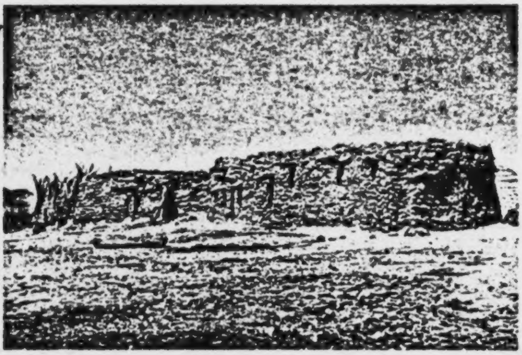

Fig. 247. House (*tarajamt*) of the type depicted Fig. 246. The mud plaster is decaying and the stones are visible. Ayr, Awderas.

houses I saw at Djelfa in the Sahara Atlas. Further south in the true desert, and also in adjacent parts of the Sudan, mud houses have flat roofs. We see that mud houses are not limited to any particular environmental zone, and as a matter of fact they occur in the Sudanese zone even though they are not particularly well fitted for its climate. This fact has been emphasized by Capot-Rey who believes it an indication that mud houses have been imported from other regions (Capot-Rey 1953a, p. 231 f.). 342* 171

There are two distinct types of mud houses in the Sahara. The common type is that built of sun-dried bricks. It is found in many oases and also in Sudanese towns and cities, including Agadez, where some houses are decorated with reliefs or paintings on the facades – a custom which to my knowledge is unknown further north in the desert. The other type of mud house is constructionally rather different from that built of sun-dried bricks. It is built of cones or balls of mud piled upon each other before they are dried in the sun. The distribution of such constructions is unknown. They are mentioned by Nicolas from Ingal and Tegidda-n-tésemt (Nicolas 1938, p. 67), and I have myself seen houses built in this way at these two towns. In Ayr there are very few mud houses built of sun-dried bricks except in Agadez, Ingal, and Tegidda-n-tésemt. In Ahaggar there are mud houses at Tamanṛaset and at Abalessa, but these dwellings are not common at other cultivation centres where most people have other dwelling types.

A.2. *Houses built of stones and mud.*

342*

Solid houses of this type occur in certain Ayr villages (e.g., Awderas). In some houses the rather heavy walls are built of mud into which the stones have been inserted, while the walls of other houses appear to be built of stones kept together by a thin layer of mud between them. In this latter case mud balls may substitute for stones, as mentioned by Rodd (Rodd 1926a, p. 238 ff.). The Ayr houses can be rectangular or square. Some houses have two or three rooms (cf. Fig. 246), but very few of the houses seem to be inhabited. The houses always have flat roofs in which wooden drain pipes are inserted. They do not generally have a closed courtyard at the front as have Arab mud houses.

Houses built of stones and mud are also found in certain villages of Ahaggar and Tasilé-n-Ajjer and are inhabited to-day by agriculturists. In Abalessa they are mixed with true mud houses, the settlement being divided into four quarters as follows:— (1) *Arakayna* which is inhabited by black-skinned agriculturists known as *Ikewweren* who are said to have immigrated from Tasilé-n-Ajjer. (2) *Bukhelfa* which is inhabited mainly by agriculturists whose ancestors were Tuareg slaves in Ahaggar. (3) *Éfeli-n-Dag Ṛali* mainly inhabited by agriculturists (*Ḥarratin*) who have immigrated from Tidikelt. (4) *Tindar* which is inhabited exclusively by agriculturists of Tidikelt. The two first village quarters are situated close to each other and have houses built of stone and mud in contrast to the two last quarters which are inhabited by Arabic-speaking *Ḥarratin* who live in true mud houses of the Arab type. 621 162

A.3. *Houses with dry walls.*

In Tasilé-n-Ajjer and in Ayr I have seen a few house ruins with walls of stones, but I was not able to judge whether the stones were originally kept together by thin layers of clay or similar material.

172 The so-called *Tomb of Ti-n-Hinan*, an enormous fort at Abalessa in Ahaggar dating back to the 4th century A.D., has dry walls (cf. Reygasse 1950, p. 88 ff.; Capot-Rey 1953a, p. 95).

*342 Any solid house of the above mentioned types is known to the Tuareg as *taṛahamt* (Ahaggar) or
[253] *taṛajamt* (Ayr). Pastoral Tuareg do not like to live in houses, and some of them believe that they may contract an illness if they stay too long in a house (cf. Capot-Rey 1953a, p. 221).

*342 Capot-Rey thinks that mud houses with terraces were introduced into the Sudan with the Arabs
174 (Capot-Rey 1953a, p. 231 f.), while Engeström and Le Moal hold them to be pre-Islamic (Engeström 1959, p.64–69; Le Moal 1960, p. 202). I believe that houses built of sun-dried bricks are post-Islamic in Tuareg countries. This agrees with Nicolas' statement that there are two Hausa words which are generally used for sun-dried bricks, and both words are derived from Arabic (Nicolas 1938, p. 67). Furthermore, houses constructed in this way are not very common in the Southern Sahara except in towns and cities. In Ahaggar there were apparently no houses built of sun-dried bricks until the beginning of the French occupation when the immigration of Tidikelt Arabs increased.

Houses built of balls of mud piled upon each other before sun-drying are no doubt pre-Islamic (cf. Nicolas 1938, p. 67), and we know that this is also true of houses built of stones and mud. They are still widely found in the Sahara and constituted an important dwelling type in ancient towns and cities including Ghana. Capot-Rey thinks that houses built predominantly of stone were introduced to the Sahara and the Sudan by Berber tribes of the north, and that these houses have to some extent displaced the straw-huts of the Negroes (Capot-Rey 1953a, p. 233). A connection between the stone houses of the Sahara and the immigration of Berbers is also claimed by Rodd, who thinks that the oldest type of solid houses in Ayr (the "A-type" according to Rodd's division) was built of stone and came to Ayr with the *Itésen* Tuareg (Rodd 1926a, p. 244 ff.). I myself was frequently told by Tuareg of Ayr that originally there was a very close association between the *Itésen* Tuareg and stone houses,
and various ruins of houses built of stone or predominantly of stone are ascribed to the *Itésen*. Ruins
[173] at Tegidda-n-tagayt of small rectangular houses and a ruin at the same place of a large fort or walled enclosure, measuring about 35 × 35 metres, are said by modern Tuareg to derive from the ancient *Itésen* Tuareg who according to native tradition were among the early Tuareg immigrants (cf. p. 412).

*342 It seems that houses built predominantly of stone are of very great age in the northern parts of the
172 Sahara, including Tasilé-n-Ajjer. At Éherir, situated in the latter mountain massif, there are house-ruins with walls of stones kept together by a thin layer of clay or similar material. It has been suggested that these constructions may reach back to antiquity and be due to Roman influence (cf. Lhote 1955a, p. 87).

*342 Though solid houses built of stone seem to be very ancient in Tasilé-n-Ajjer, it would seem that
172 all types of solid houses were introduced into Ahaggar in late pre-Islamic times. For the oldest house-
174 ruins of Ahaggar, apart from the *Tomb of Ti-n-Hinan*, show walls of stones united with mud at Silet, and seem to derive from Arab marabuts who lived there during the reign of the *Imenan* (cf. p. 393).
*342 There are also house-ruins, probably of the same age, at Tit (Lhote 1955a, p. 87, 286). Apart from these
174 ruins the Tuareg of Ahaggar say there were no solid houses in Ahaggar until about a hundred years

*342 ago when the *Ḥarratin* agriculturists immigrated from Tidikelt. Most people even aver that there
174 were hardly any houses in Ahaggar until the arrival of the French at the beginning of the century. This is confirmed by Foucauld (1951–52, II, p. 609), and Bissuel was told by the Tuareg captives at
361 Algiers that Abalessa had no solid houses but only straw-huts (cf. Bissuel 1888, p. 53). It is true that
125 Hornemann mentions a village comprising 25–30 houses built of stone and situated in the country
*[342] of Hhagarâ (Hornemann 1803, I, p. 154 f.). But Hornemann travelled further east and never visited Ahaggar or Tasilé-n-Ajjer. His information may perhaps refer to a village in the latter region also inhabited by noble *Ihaggaren* Tuareg. Permanent settlements of Ahaggar are apparently never mentioned in the writings of Medieval Arab authors. We know that Ahaggar was visited by Ibn Batutah. He does not mention any settlements in this country, of which and its inhabitants "there is little good to say" (Ibn Batutah IV, p. 446).

*342 A.4. *Subterranean or semi-subterranean dwellings.*

[172] Subterranean or semi-subterranean dwellings seem to be unknown in Ayr and also in the regions inhabited by most other Southern Tuareg though found among sedentary people along the Niger
[513] Bend (cf. Hefel 1946, p. 190 ff.). They are known also in Ahaggar where they are used exclusively by black-skinned agriculturists who claim that this type of dwelling named *eddamus* was introduced into Ahaggar with the *Kel Ĝanet*. This agrees with the fact that these dwellings are particularly common in the region of Taṛhawhawt where many of the *Kel Ĝanet* live. However, subterranean dwellings nowadays are also used by certain other sedentary agriculturists of Ahaggar. The dwellings are not very deep, and frequently they are only semi-subterranean, the upper part then consisting of walls built of rectangular pieces of sundried mud or of stones kept together by mud. The subterranean or semi-subterranean dwelling normally has a rectangular site, and is not very spacious. Introduced by the *Kel Ĝanet*, this type of dwelling is comparatively recent in Ahaggar. I have not seen subterranean

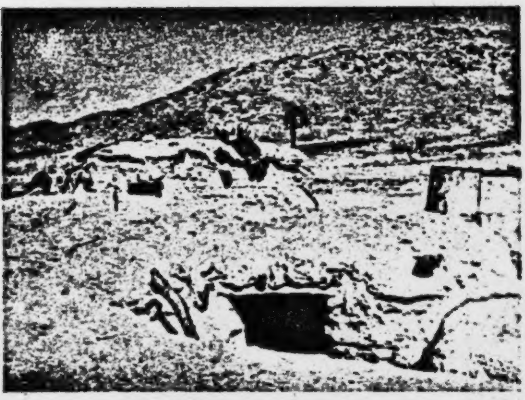

Fig. 248. Semi-subterranean house with two rooms (*eddamus*). Ahaggar, I-n-ṛawen.

*342 houses in Ganet or elsewhere in Tasilé-n-Ajjer, but I have been told that they exist in these regions
*342 to this day. Various types of subterranean dwellings are recorded as existing further north in the
171 Sahara and in the Atlas. Semi-dugouts roofed with brush are occasionally used among the Chamba (Briggs 1958, p. 120), and it is interesting to note that subterranean dwellings also occur among the semi-nomadic Chawiya of Aurès, who use such dwellings only when they live with their flocks in the desert south of the mountain massif (cf. Rivière 1938). Elsewhere in Northern Africa they seem to be found exclusively among sedentary peoples. The main area of distribution is the Atlas, Tripolitania, the northern parts of the Western Sahara, and the Western Sudan (cf. Hefel 1946 & Le Moal 1960). Frobenius considered the subterranean dwelling a so-called "Hamitic" trait (Frobenius
[124] 1933, p. 214 ff.). Recent investigations seem to indicate that this particular dwelling type was introduced to North Africa by contact with civilizations of the Western Mediterranean in pre-Christian times (cf. Hefel 1946).

*342 A.5. *Square or rectangular huts covered with plant material.*

The dwellings to be described under this item should perhaps be termed houses rather than huts as
[184] they have walls and roof made separately. They fall into two sub-types one of which is characteristic of Ayr, the other of Ahaggar and Tasilé-n-Ajjer. The two types may be historically related, but this cannot be taken for granted, for constructionally they are somewhat different.

A.5.a. In Ayr the square or rectangular hut is called *téjira*, and is found mainly among sedentary people of the *Kel Ewey* group. It is never used by pastoralists. The structure of this hut can be described in the following way:—

Nine heavy and forked poles are fixed solidly in the ground in three rows parallel to each other. In other words there are three poles in each row. These poles are called *tigettewin* (sing. *tégettewt*), the word generally used for various kinds of prongs and forked sticks or poles.

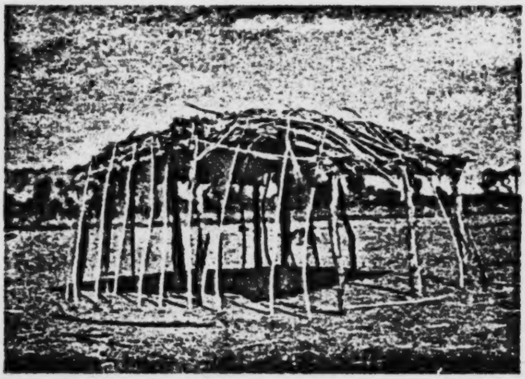

Fig. 249a. Straw-hut of the *téjira* type. The wooden skeleton of the hut with the roof covered. Ayr, Iferwan.

Each row of forked poles has a lath resting horizontally in the prongs. This lath is called *éseger* (pl. *izgar*). 342*

Two rows of boughs are fixed to the laths as a base for the roof covering. These boughs are known as *ibezaren* (no sing.). They rest with one end upon the central lath, the other end upon one of the outer laths. As the row of forked poles which carry the central lath is frequently somewhat higher than the two outer rows, the *ibezaren* boughs may be fixed in a somewhat sloping position and thus form a slightly elevated saddle roof which is covered with various kinds of plant material (e.g., palm leaves).

The walls of the hut consist of slender vertical sticks fixed in the ground and surrounded by simple [824] mats (*atenkî*) made from the stems of the *afezu*-grass (*Panicum turgidum*). The huts have only one door-opening which is generally made at one of the narrow ends.

The *téjira* hut is frequently a very spacious one, and in general it is so high that a grown man can easily stand upright in it. The poles used for the hut are rather heavy and the structure is built by the [462] men, while most other dwellings used among the Tuareg are erected by women.

A.5.b. The square or rectangular hut found among sedentary agriculturists of Ahaggar and Tasilé-n-Ajjer is called *ékeber* (pl. *ikebran*). In Tasilé-n-Ajjer similar huts are also used by certain pastoral Tuareg, though their huts generally are round and provided with a conical roof (cf. A.6, p. 335 ff.). In Ahaggar square or rectangular straw-huts are not generally used by pastoralists, though they may be found among certain noble Tuareg when they camp in the lower country where building material is available.

Most huts are almost square and in size up to about 6 × 6 metres so that they are generally somewhat bigger than the *téjira* hut just mentioned. One hut seen in Tasilé-n-Ajjer had a structure very much like that of a *téjira* hut with a slightly elevated saddle-back roof. The *ékeber* hut of Northern Tuareg country usually has 9 forked poles buried solidly in the soil, forming three rows of poles

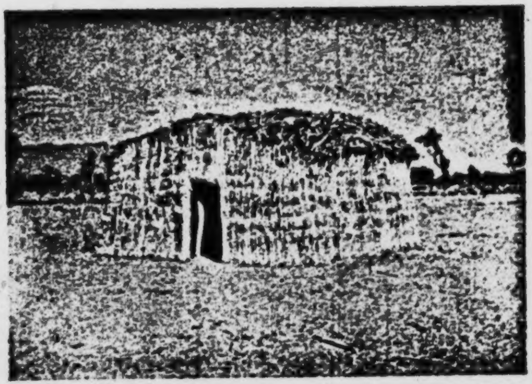

Fig. 249b. The *téjira* hut structure covered with mats a few days later. Ayr, Iferwan.

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[824]

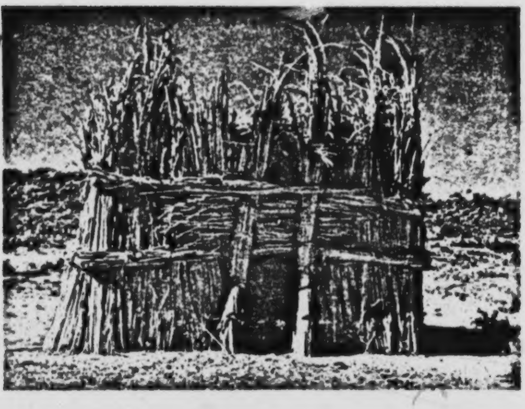

Fig. 250. A square *ékeber* hut covered with bulrush. Ahaggar, Amsel.

parallel to each other. The middle pole of the central row of poles is somewhat higher than all the other poles, connected with each other by means of laths resting in the prongs to form a square frame, which may be supported by one or two subsidiary forked poles if considered necessary. Slender boughs or laths are fastened to the horizontal laths and to the top of the forked central pole, and other slender boughs are placed over them to form the foundation of the roof-covering which consists of plant material. If bulrush is available this material is preferred, but hay of various grasses is also used. The walls of the hut are generally covered with the same material as the roof. If walls are covered with bulrush its very long stems are placed vertically around the hut-frame and attached to it by means of one or two horizontal bands of the same material (cf. Fig. 250). If hay of grasses (e.g., *tullult*; *Aristida pungens*) is employed for wall covering it is necessary to insert boughs or sticks leaning against the square frame to support the bunches of hay which are kept to the wooden structure by means of cords. I was told by old people of Ahaggar that the square *ékeber* hut was introduced to Ahaggar with the immigration of the *Kel Ġanet*. This is very likely, for I have seen identical huts at the oasis of Ġanet and also among some pastoral Tuareg of Tasilé-n-Ajjer. Some huts have only one entrance which is placed at the middle of one of the walls, but huts may also have two openings sited opposite to each other to provide a current of air. The door-openings can be closed by means of a shutter made from bulrush, grass-stems, or palm material. The square *ékeber* hut is generally so high that grown people can stand upright within it. [824]

*342
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Huts akin to the square *ékeber* hut of Northern Tuareg country seem to have a rather wide distribution in adjacent parts of North Africa. They are used in the Fezzan from where they have been described in some detail by Scarin and Despois (Scarin 1934, I, p. 110 ff. Despois 1946, p. 80 ff., pl. XIX–XXI). It is possible that square huts of the *ékeber* type also occur at El Golea in the north of Algerian Sahara (Collection Photographique du Musée de l'homme, 34.1019.222), at Ksar El Azoudj of Oued Zousfana south of Monts des Ksours of the Sahara Atlas (Collection Photographique du

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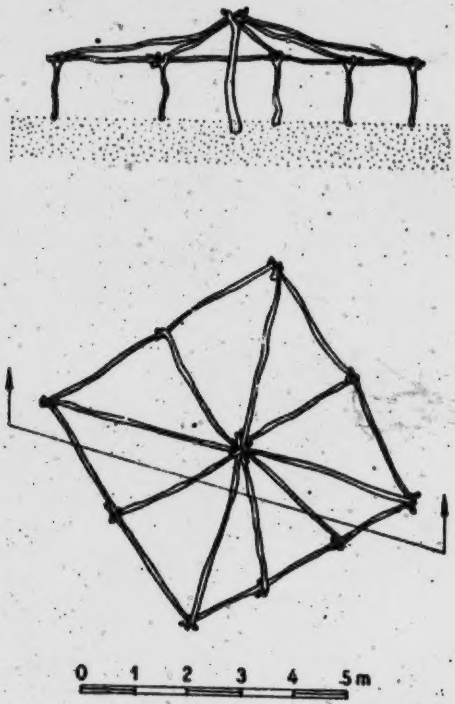

Fig. 251. The structure of a square *ékeber* hut. It was covered with bulrush and belonged to a camp of the *Kel Ṛela* tribe at Utul in Ahaggar.

Musée de l'homme, E.47.48.526), and perhaps also in Southern Morocco (Puigaudeau 1945, photograph p. 112). It is possible that huts of the square *ékeber* type are far more widely known in the Northern Sahara. Huts (*zeriba*) of palm material among the semi-sedentary *Chamba Berezga* at Metlili (cf. Mercier 1922, p. 144) may perhaps be of the square *ékeber* type – if they do not belong to the cylindrical type mentioned below. Square huts (*zarbia*) seem to occur also among the Fellaḥin of Egypt (cf. Ayrout 1938, pl. V, p. 64, p. 134; Schildt 1957, ill. p. 112). Rectangular huts measuring 6 by 2 metres are common in the region of Gurara (cf. Bisson, Le Gourara, p. 158). 342* 171

A 6. *Round huts or houses with conical roof.*

Huts of this type, known as *ékeber* (pl. *ikebran*), are very common among the Tuareg of Tasilé-n-Ajjer, [137] where the *tabarekkat* tree (*Tamarix aphylla*) and the *tullult* grass (*Aristida pungens*) are abundant, *342 A Tuareg hut of this type from the *Kel Terurit* (*Isekkemaren*) belonged to the chief of that tribe. It lay not far from Ft. Polignac (Élégi) and I lived in it for several days. It was constructed as follows:—

A heavy central forked post with a diameter of about 0.15 m at its thick end was buried solidly in the ground. Nine smaller forked sticks about 1.50 m high and with a diameter of about 0.07–0.08 m were fixed in the ground in a circle around the central post with a distance of 1.50–2.00 m between each. Nine laths with a diameter of about 0.07–0.08 m rested in the prongs of the nine forked sticks and were united in the large prong of the high central post. Sticks of the same diameter were placed horizontally over the prongs of the nine vertical sticks surrounding the central post. The nine laths formed the basis of the conical roof construction, and smaller boughs were laid over them to support the thick layer of *tullult* grass covering the roof. The wall was also covered with large bunches of *tullult* grass which were supported by small boughs put in the ground and leaning against the vertical forked sticks and their horizontal laths. This grass or hay covering the wall was kept to the wooden construction by means of a long rope made of goat's hair running round the hut. Cords of the same material and also pieces of bast were used to tie the various elements together. The hut had two entrances about 1.50 m wide and 1.00 m high. These were placed opposite each other (N-S) to permit a current of air to circulate through the hut. Other huts seen among the Tuareg of Tasilé-n-Ajjer were very similar to that described, but most of them were smaller and had a less elevated central post. Some of the huts did not have an entirely round ground-plan and were not easily distinguishable from the square straw-hut mentioned above. However, there was no doubt that most huts used among the pastoral Tuareg of Tasilé-n-Ajjer were round or cylindrical in form and had a conical roof. Most Tuareg of this area live in round strawhuts nowadays, and I saw this type even among true noble
*342 Tuareg of the *Uraren* tribe. The huts are used mainly in the hot summer season when pastoralists
361 camp around wells and water-holes, while most people in winter use skin-tents. The huts are built by the women and they are not transported if the camp moves to another place as building material is easily found. Moreover, it seems as if many pastoralists during the hot season always return to the same place at a definite well or waterhole. Duveyrier states that in such fixed camps ("campements

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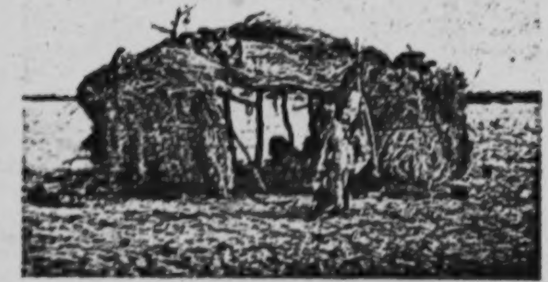

Fig. 252. A small cylindrical *ékeber* hut covered with *tullult* grass (*Aristida pungens*). Tasilé-n-Ajjer.

[text continues on p. 338]

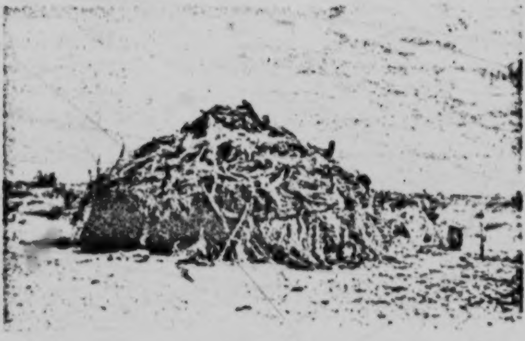

Fig. 253a. A large cylindrical *ékeber* hut. It is covered with a thick layer of *tullult* grass (*Aristida pungens*). The structure of this particular hut is depicted in Fig. 253b below. Tasîlî-n-Ajjer. The *Kel Terurit* tribe.

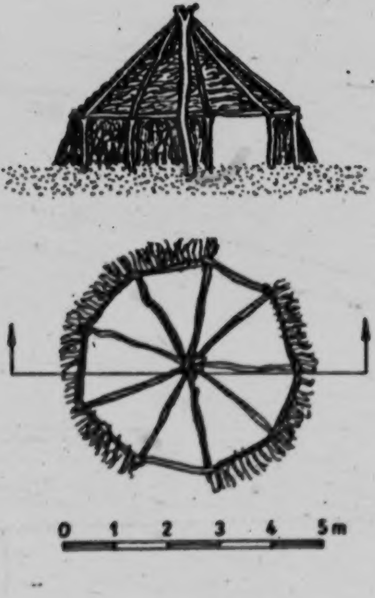

Fig. 253b. The structure of the *ékeber* hut seen on the photograph Fig. 253a. Tasîlî-n-Ajjer, the *Kel Terurit* tribe.

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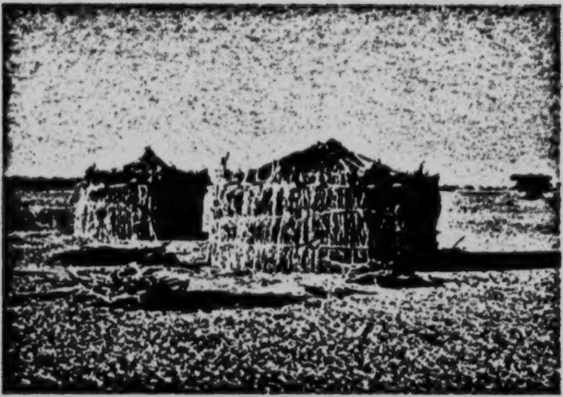

Fig. 254. Cylindrical huts with conical roofs. The Fezzan area. Photograph by Dr. Erik Smidt, Copenhagen.

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Duveyrier states that in such fixed camps ("campements de station") the noble Tuareg of Tasilé-n-Ajjer live in tents, while the vassals use straw-huts (Duveyrier 1864, p. 403). The Tuareg of Tasilé-n-Ajjer agreed that this was so in the past, but nowadays noble Tuareg and vassals alike prefer the straw-hut in summer because the leather tent is extremely hot at that season. Barth also states that many vassal Tuareg of the *Kel Ajjer* do not live in leather tents like the noble Tuareg, but in round, conical huts akin to those of Central Africa, and he says that many Tuareg of the *Ajjer* group have an intermediate position between sedentary and nomadic people (Barth 1857–58, I, p. 257). Everything seems to indicate that the straw-huts (*ikebran*) used among the Tuareg of Tasilé-n-Ajjer form the traditional dwelling of most vassal Tuareg, and it seems as if the round and conical *ékeber* type is of more ancient date with them than the square or rectangular type A.5.b.

*342 Cylindrical huts with a conical roof are used by the Tuareg who live in the Fezzan area, and they are also here somewhat mixed with the square or rectangular straw hut. This is stated by Despois who describes these dwellings in some detail (Despois 1946, p. 83 f.). A round hut with conical roof similar to the hut mentioned above from the Tuareg of Tasilé-n-Ajjer, but having 16 forked sticks around the central post instead of 9, is described in detail by Scarin from the Tuareg of the Ṛadames region (Scarin 1934, I, p. 112 f., Fig. 90–94 & phot. 42).

In Ahaggar cylindrical huts or houses with conical roofs are less common than in Tasilé-n-Ajjer. I have seen very few of them, and they seem to be of different origins as follows:—

[221] Huts akin to the round *ékeber* type described above from Tasilé-n-Ajjer were seen in the *Amenukal's* camp close to the village of Abalessa, and the same type occurred at Silet where it was used by Tuareg pastoralists of the tribes *Iklan-en-tawsit*, *Ikechchemaden*, and *Dag Ṛali* during their stay at Silet to harvest dates. These latter huts were made from very thick poles of palm trunk and their construction was identical to that described from Tasilé-n-Ajjer above (cf. Fig. 253 a-b). The palm trunk poles were

cleft at their tops to provide a sort of prong to support horizontal laths and roof laths. These dwellings were not built by the Tuareg themselves, but were erected by sedentary agriculturists of Abalessa who assisted the Tuareg during harvest. It is most likely that there is a connection between these huts and those used among pastoral Tuareg of Tasilé-n-Ajjer, for they are built according to the same structural principle. 342*

Three huts constructionally somewhat akin to the round *ékeber* described above from Ahaggar were seen at Abalessa. The huts were inhabited by blacksmiths (*Ineḍen*), who had immigrated from Adraṛ of the Ifoṛas comparatively recently, and they claimed that the huts were built according to a method generally applied in their original homeland. [564]

The photograph Fig. 254 taken by Dr. Erik Smidt, Copenhagen, who has travelled in Tripolitania and in the Fezzan, shows a cylindrical hut with a conical roof of a type found in the latter region. Huts or houses of much the same type are also depicted by Barth from Éderi (cf. Barth 1857–58, I, ill. p. 153). I believe that all these dwellings built of plant material in the regions of Ahaggar, Tasilé-n-Ajjer, the Fezzan, and Tripolitania are related to each other, and they are perhaps also historically related to cylindrical houses with more solid walls built of stone. I have in fact seen one such dwelling in Tasilé-n-Ajjer (in Oued Aharhar close to Afara).

Cylindrical huts and houses are used for summer dwellings by the people of Medenine in Tunisia where these dwellings fall into two groups:— (1) the *kib* which is covered with mats, and (2) the *lahia* which has a wall built of stone (cf. Bernard 1924, p. 19 f.). The cylindrical mat-covered hut, the *kib*, is also described from Tunisia by Despois. It has a central post fixed in the ground and carrying a cross-bar which is further supported by two poles — one at each of the ends of the cross-bar. Certain huts, also known as *kib*, have an oblong form, but most of them are cylindrical. Certain huts are portable, but the majority is a kind of permanent or semi-permanent dwelling for poor people during the summer (cf. Despois 1955, p. 404 f., pl. XVI Fig. 1). 342* 171

Cylindrical huts or houses with conical roofs seem to be of very great age in North Africa, having been known to the ancient Eastern Libyans (cf. Bates 1914, p. 169 f.). Great age must no doubt also be attached to cylindrical buildings with conical roofs used as barns among the Kabyle of Djurdjura.

Cylindrical houses or huts with conical roofs also occur within Southern Tuareg country, but they are to my knowledge nowhere built by pastoral Tuareg of this extended region. In Ayr I have noticed that such huts or houses are also extremely rarely used by sedentary agriculturists. I have only seen this dwelling form at Iferwan and at Ingal. 342*

At Iferwan there seemed to be only two cylindrical dwellings which were built within a sort of compound together with a square *téjira* hut and a beehive hut (cf. A.5.a & A.8.). Both buildings were thatched with straw, which at the top was formed into a kind of tuft as is frequently seen with some Sudanese huts. One of them had a cylindrical wall consisting of a piece of matting, while the other had a wall plastered with mud – also very common in Sudanese villages. I believe that the forms of both dwellings were due to Sudanese influence, but I did not investigate their structure. That cylindrical huts or houses with conical roofs occur at Iferwan has also been mentioned by Foureau (Foureau 1905, p. 883 ff.). [270]

34 The hut I saw at Ingal was situated close to the market place, and was apparently not used as an ordinary dwelling. It had a low cylindrical mud wall and a high, conical roof covered with straw.

*342 171 It is curious that cylindrical houses with conical roofs are so extremely rare in Ayr and its adjacent regions, for they have a very wide distribution among sedentary shifting cultivators of Damergu, and I have seen them almost everywhere in the region between Zinder and Dakar. There can thus be little doubt that they play a part for many sedentary agriculturists living in the regions dominated by such Sudanese Tuareg as the *Kel Geres*, the *Iwllemmeden*, and the group of *Kel Tademaket*. Among sedentary farmers of the Ader area in the *Kel Dennek* territory, Nicolas mentions and depicts a typical Sudanese cylindrical house with a conical roof (Nicolas 1938, p. III p. 63 & 1950a, p. 156 f.), but it does not appear that this type of dwelling is used by the Tuareg or by negroid castes of Tuareg society. Nicolas also mentions a straw hut of the *Kel Dennek* Tuareg, but this is so unsatisfactorily described that it is impossible to gain any clear idea of its form and construction – despite illustrations. In an early study this hut (*akaber*) is described as a cylindrical hut with a flat roof (Nicolas 1938, p. 61, pl. I p. 55), while in the later book on the *Kel Dennek* he mentions a hut called *akarben* (*ekarben*) which seems to be of cylindrical form. It has a central post named *tamâkait* (*tamankayt*) and, perhaps, a slightly elevated roof (cf. Nicolas 1950a, pl. VIII, p. 155). In both studies Nicolas says that straw-huts of this type are used mainly by slaves or manumitted slaves who are semi-sedentary, but he adds that in the very hot season certain Tuareg make their slaves build for them huts of this kind.

*342 174 It is possible that cylindrical houses, including barns like those used in the Sudan, were introduced to certain oases of Adrar-Timimoun from the south (cf. Stuart 1936, p. 299, ill. p. 256, 294). Sudanese Negroes may in fact have been responsible for the distribution of these dwellings even as far north as Morocco. This is stated by Despois, who is of the opinion that the cylindrical huts or houses with conical roofs (called *nwala* while the proper name is *ḳabbusa*) were introduced with black-skinned troops coming to Morocco from the Niger Bend during the 17th century A.D. The relations between the Sudan and Morocco initiated at the end of the 16th century by Sultan *Aḥmed al-Manṣur*, gave rise to the immigration of negroid peoples who took dwellings of the *nwala* type with them (Despois 1949, p. 308 f., 529, pl. VI B.).

*342 171 I think we may conclude our analysis of cylindrical huts or houses with conical roofs as follows:— (1) It is most probable that they are very ancient and traditional to many vassal tribes of Tasilé-n-Ajjer. To-day they constitute their prominent type of dwelling, which should probably be viewed in connection with the occurrence of related dwelling forms in the Fezzan, and in Tripolitania – the more so as it seems as if many cultural traits and migrations of peoples have followed the route from the Mediterranean via Tripolitania and the Fezzan to Tasilé-n-Ajjer. We know that the type was used among the Eastern Libyans of Antiquity. I believe cylindrical dwellings of Ahaggar like those used among certain Turreg of the *Amenukal*'s camp and those found at Silet, are probably historically related to the cylindrical dwellings of Tasilé-n-Ajjer. (2) It seems as if cylindrical huts or houses with conical roofs are rarely used by Sudanese Tuareg, though they are common among sedentary agriculturists within the territory dominated by Southern Tuareg groups. These Sudanese dwellings have spread northwards in the Western Sahara via Tawat to Morocco. – We see that distributional studies of cultural traits are extremely difficult and liable to give very wrong results. It might have been natural to have suggested a direct historical relationship between the cylindrical dwellings of Morocco and those occurring further east in the Atlas. But it seems to be a fact that this dwelling type has been introduced fairly recently into Morocco, while in the Eastern Atlas and adjacent regions it dates very far back in time. Distributional studies of dwelling types should consider their structural features. Identical outer forms showing continuous distribution do not necessarily have the same historical origin. 342* 171

A.7. *Conical huts.*

They are very rare in Tuareg country where I have never seen them. They are mentioned by Nicolas from the *Kel Dennek* among whom they are used by semi-sedentary slaves (Nicolas 1938, p. 62 ff. & 1950a, p. 156 f.). Huts of this type seem to be common further east in the Sudan around Lake Tchad (cf. Foureau 1905, III, p. 963, 984). 342* [171]

A.8. *Beehive huts.*

Conical huts and beehive huts are believed to be among the oldest types of huts known to mankind (cf. Birket-Smith 1948, p. 311 f.). This is a reasonable hypothesis because such dwellings are typical of many primitive peoples with a mixed hunting and collecting economy. It is also evident that these dwelling types are often very plain in their structure. There is a resemblance between beehive huts and so-called barrel-vaulted huts, and many authors have grouped these dwellings together under the designation of "dome-shaped huts". As I attach a great value to a classification of traits based on detailed analysis of structure, I distinguish between beehive huts and barrel-vaulted huts. 342* 121

Though beehive huts are typical of many peoples at a primitive economic stage they are nevertheless extremely common also at more developed cultural levels. I believe that the fact that true beehive huts are widely used among many agriculturists of Northern Africa, while they seem to be less common among pastoralists who tend to use barrel-vaulted huts or other dwelling types has tended to be lost sight of. [171]

I have never seen true beehive huts in Northern Tuareg country, and they are not mentioned in literature from this part of the Sahara. However, in the collection of the Musée de l'homme a photograph (V. 31.1557.99), stated to be taken in an oasis of Tasilé-n-Ajjer, shows a beehive hut, or perhaps a barrel-vaulted hut. 342*

Beehive huts form the most important type of dwelling for the sedentary agriculturists of Ayr, and huts of beehive form are occasionally erected also by pastoralists. I have noted the following types of beehive structures among the *Kel Ayr*:—

A.8.a. A very simple beehive hut known to the Tuareg as *atram*. The structure consists of slender boughs (*imesekten*; no singular form) which are fixed in the ground, bent against each other, and attached each to each at their tops. This simple structure is covered with bunches of straw of *afezu* grass (*Panicum turgidum*) fastened to the skeleton of bent boughs by means of cords. Such huts are not used in ordinary camps of the pastoral *Kel Ferwan* Tuareg who make these simple dwellings for temporary use. Herdsmen, for instance, build them when herding camels or flocks away from the

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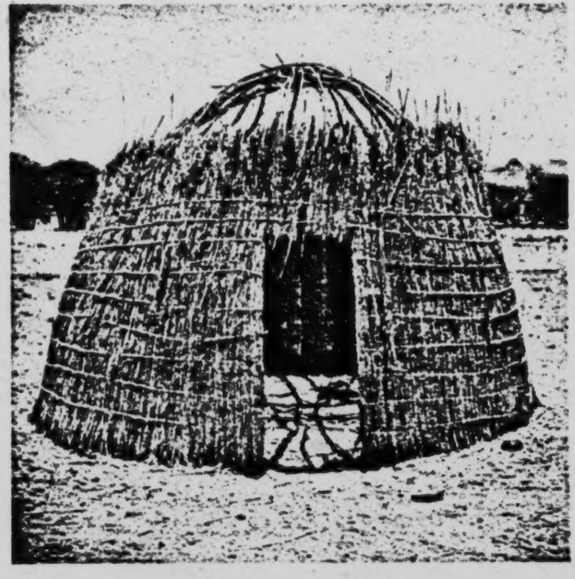

Fig. 255. A half-finished beehive hut (*atṛam*). Its main structure consists of boughs fixed in the ground and tied to each other at the top. The hut is surrounded by a mat made from *afezu* grass (*Panicum turgidum*). Ayr, Iferwan.

camp for some time. But even in this case it seems as if beehive huts are rare, and I have only seen one deserted hut of this type among pastoralists.

A.8.b. A beehive hut structurally close to the above-mentioned *atṛam*, used among pastoralists, is also found among sedentary people of Ayr, particularly among farmers of the *Kel Ewey* group. The structure consists of bent boughs lashed together at their tops, but between these boughs heavier sticks are fixed in the ground and slender rods are horizontally attached to the bent boughs and the sticks to support a simple grass mat drawn around the hut. This may perhaps be seen from the photograph Fig. 255 which shows an almost finished hut of this type. However, the beehive hut used by most Ayr farmers has a more elaborate structure which will now be described.

A.8.c. The beehive hut generally seen in Ayr is called *tatṛamt*. Its basic elements are four arches, termed *igegan* (sing. *egegu*), made from slender rods lashed together with strips of dum palm leaves. [824] The slender rods may be the midribs of date palm leaves, but rods of *ébezgin* (*Salvadora persica*) are generally preferred for arches. Two arches made in this way are placed parallel to each other and with a very short distance between them. They are not buried in the ground, but are fastened to short heavy poles (*iseḳtan*, sing. *aseḳtu*) fixed solidly in the ground. The two other arches, which are fastened to similar poles and placed parallel to one another, cross the first pair of arches at a right angle.

In addition to these four arches there are four semi-arches, also made from bundles of lashed rods of *ébezgin*. These semi-arches are termed *inemanyen* (sing. *enemanyi*). They are fastened to strong poles (*isektan*, sing. *asektu*) which are fixed in the ground between the four poles carrying the two pairs of *igegan* arches. The semi-arches may be so high that they almost touch the top of the hut, but they are not lashed together at their upper ends.

A number of somewhat lighter poles named *t'isisra* (sing. *tasasrut*) are set in the ground between the short heavy poles carrying arches and semi-arches. These poles are somewhat more than half the height of the hut.

Slender rods are fastened horizontally around the lower part of the structure, being attached to the arches, the semi-arches, and the vertical poles. These rods are known as *ilegwan* (sing. *élaweg*).

Slender rods are placed horizontally around the upper part of the hut structure, fastened to the upper parts of arches and semi-arches by means of strips of dum palm leaves. These rods are called *t'iṛedyin* (sing. *téṛadeyt*).

When all above-mentioned elements have been lashed together, a central post is normally inserted to support the structure, though in small huts this may be dispensed with. The central post has a natural prong at its upper end, and like most forked sticks or forked poles is known as *tégettewt* (pl. *tigettewin*). The central post carries a short piece of wood placed horizontally in its prong to serve as a cross-bar (*ettebel*). The insertion of these elements into the hut structure is done by pressing the central post with its cross-bar firmly against the top of the arches in order to bury the lower end of the post in the ground. The central post with its cross-bar strongly supports the beehive structure, which is made predominantly of lashed bundles of slender and flexible rods.

The lower part of the hut is covered with a simple mat made of *afezu* grass (*Panicum turgidum*). It is fastened to the horizontal rods and the vertical sticks of the hut structure by means of strips of dum

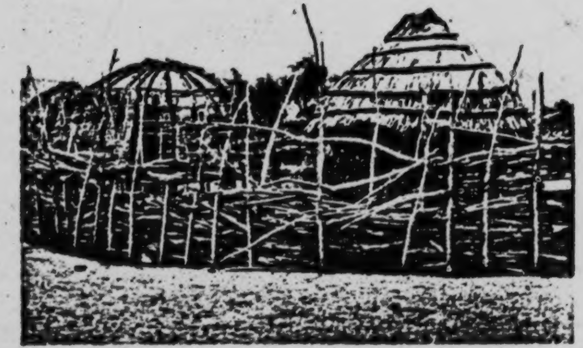

Fig. 256. Bechiev huts of the *tatyamt* type. The wooden skeleton is seen to the left, the finished hut covered with *afezu* mats and a layer of palm leaves over the dome-shaped top to the right. Ayr, Iferwan.

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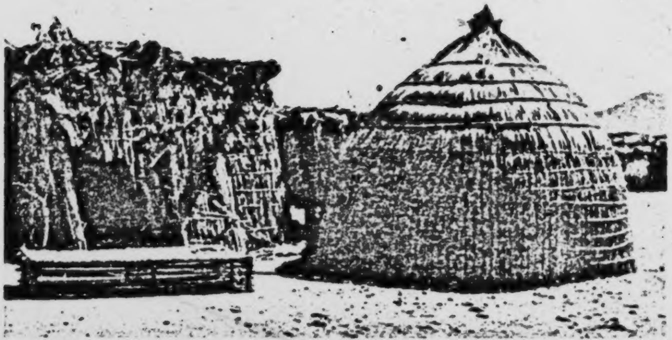

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Fig. 257. A square *séjira* hut (left) and a beehive hut of the *tatramt* type (right). To the left is also seen a bed of palm fronds lashed together with hide. These beds are used by sedentary agriculturists. Ayr, Awderas.

palm leaves. The upper part of the hut is generally covered with palm leaves kept together by means of outer circular rods, but, before the roof is laid on, a small plaited mat attached to a wooden frame and known as *tégelengelt* (pl. *tigelengelin*) is placed over the top of the structure as a protection against rain. Seen from the outside beehive huts of this type bear a resemblance to cylindrical huts with conical roofs. Beehive huts of the structure just described vary much in size. A normal hut is about 1.75–2.00 metres high with a diameter of about 2.50–3.00 metres.

Beehive huts possibly different from those mentioned above are described by Rodd. They are said to have a frame made of palm-frond ribs planted in the ground and tied together at the top, and according to illustrations they are covered exclusively with straw. Rodd's illustrations of beehive huts are taken from the villages of Towar and Timia (Rodd 1926a, p. 184, pl. 20). Huts akin to those mentioned by Rodd have also been depicted by Buchanan (Buchanan 1926, p. 140). [103]

Beehive huts are extremely common in Southern Tuareg countries and adjacent regions. In Ayr I have seen beehive huts of the *tatramt* type in all villages visited from Iferwan to Agadez, and they also occur in Damergu together with cylindrical huts with conical roofs. I have not seen beehive huts at Zinder, but they are found among the sedentary Hausa of the Birni – N'Koni region – according to the excellent exhibition of the IFAN Museum at Niamey. Hausa beehive huts differ as to construction. Some huts have a cylindrical wall built of mud and supporting the roof, which may also be plastered with mud at the inner side, while other huts have a cylindrical mud wall inside the lower part of the structure and a pronged central post to support the roof. There are also very simple beehive huts which serve for sleeping huts; they are sometimes placed upon high platforms where mosquitoes are less embarrassing. Beehive huts are extremely common along the Niger where I have seen them

*342 171

almost everywhere between Niamey and Ayoru. The Zerma-Sonɽay and related peoples of this region 342* have huts made of boughs burried in the ground, lashed at their tops, and supported by a pronged 171 central post equally fixed in the ground. Some huts have a cylindrical mud wall inside the structure as among the Hausa. Beehive huts are depicted from Gao by Barth (Barth 1857–58, V, p. 216), from Faraka by Frobenius (Frobenius 1933, p. 233), and from Timbuktu by Caillié (Caillié 1830, Atlas). Around Timbuktu beehive huts are used by *Bella*, and also by Arabs of the Berabich belonging to the Cherif class or to the blacksmith caste. These Timbuktu huts are described in some detail by Dupuis-Yakouba and by Miner (Dupuis-Yakouba 1921, p. 20; Miner 1953, p. 19, 36 f., 40, ill. p. 61). It seems as if beehive huts also occur at Djénné (Dubois 1897, ill. p. 210, 232), and it is stated by Monteil that pastoral Fulani of this region have beehive huts with a central post (Monteil 1932, p. 214). According to the exhibition of the IFAN Museum at Niamey there are also simple beehive huts among the Fulani within the Niger Republique. This was confirmed by informants of Niamy, and my friend Johannes Larsen, civil engineer of Northern Nigeria, has informed me that beehive huts are common among the Fulani of this region. Further east in the Sudan there are beehive huts towards the region of Lake Tchad (cf. Foureau 1905, III, p. 948 f.).

Beehive huts play a great part for sedentary peoples of the Sudan, and they are perhaps far more common than generally assumed, as many huts which appear from the outside to be cylindrical huts with conical roofs may structurally be beehive huts. This is obviously the case with a "Kegeldachhütte" described from Faraka by Frobenius (Frobenius 1933, p. 233), and the dwelling described by Fuchs as "das Kegeldachhaus der Tubu" seems to be a beehive hut supplied with a cylindrical stone wall on the inside of the lower part of the structure (cf. Fuchs 1961, p. 15 ff.). Further north than Tibesti, where beehive huts seem to constitute the prominent dwelling type in villages, this type of dome-shaped dwelling seems to be rare. But Briggs states that hemispherical huts are found among

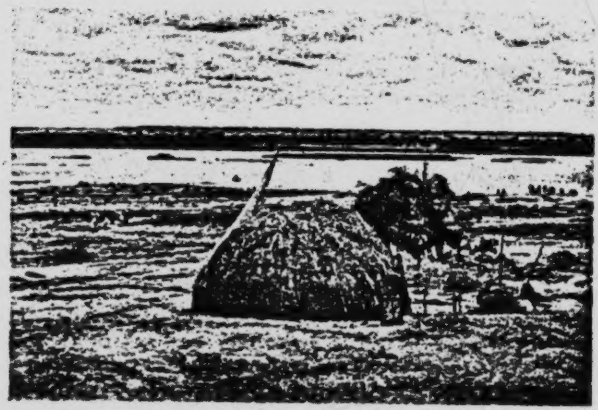

Fig. 258. A beehive hut of Zerma fishermen at Niamey on the Niger.

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Songhai MS20

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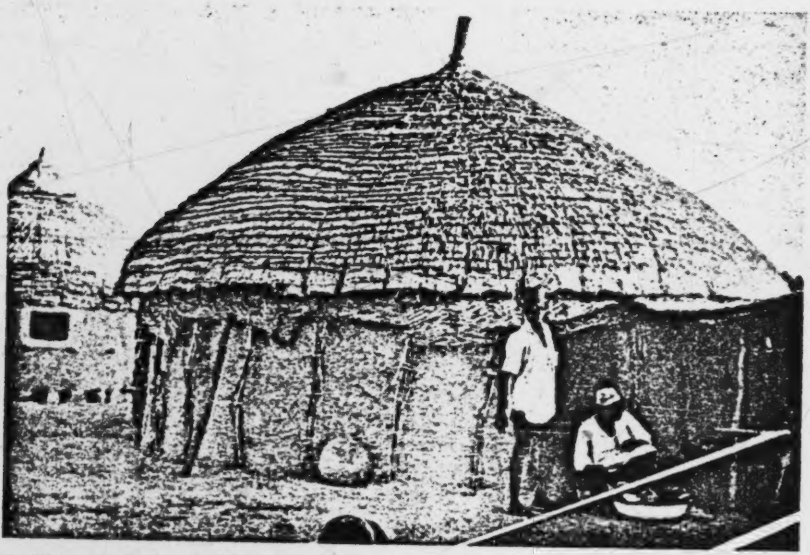

Fig. 259. Sonɣay dwelling resembling a cylindrical house with conical roof. Structurally it is a beehive hut consisting of 30 semiarches each made from a bundle of lashed rods and connected at their tops. The structure is supported by a heavy central post (*bongere*) buried in the ground. The upper part of the structure carries the thatched roof while the lower part is uncovered but surrounded by a cylindrical mud wall on the inside. The hut has a diameter of 5–6 metres and a little barrel-vaulted hut (*tongotongo*) covered with mats is erected within it. To the right is a simple sunshade serving as the workshop of three weaving men. The photograph was taken at the IFAN-Museum, Niamey.

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the Chamba (Briggs 1958, p. 120), and beehive huts are also mentioned from Tunesia (Bernard 1924, pl. II) and from Tripolis, where they may have been introduced by Sudanese Negroes (cf. Todd 1912, ill. p. 90, 102). As far as I know beehive huts do not occur in the Algerian Atlas, but I have seen a kind of beehive structure erected in a market place of a Kabyle village. It seems as if beehive huts are found in Morocco (Meakin 1902, p. 48 f.; Coon 1931, pl. 22 p. 72) and they may perhaps be more widely found in the Atlas, as a great variety of huts mentioned in literature on North Africa is known by the term *gurbi*.

Beehive huts of various types exist within very different economic cultures of Northern Africa. Their distribution does not correspond with that of any African cultural complex. There may seem to be some agreement between the distribution of beehive huts and the distribution of certain traits of the Eurafrican Steppe-Hunting Culture. However, these distributions are not identical, and distributions of culture elements should be studied very carefully. [177] Migrations and trading expeditions have greatly influenced the distributions of traits in Northern Africa.

A.9. *Barrel-vaulted huts*

A barrel-vaulted dwelling according to my difinition is "a dwelling with a certain number of parallel arches which form the main support for the rest of the structure". Non-portable dwellings of barrel-vaulted structure are far less important in North-west Africa than beehive huts. They seem to be known in the Fezzan area (cf. Scarin 1934, I, phot. 81 p. 169), and they are found along the Niger where they are not always used for dwellings but frequently serve as store-rooms, and the like. 342* 171

There are a few barrel-vaulted huts in most Ayr villages but everywhere they constitute a minority compared with other dwellings. 342* The origin of barrel-vaulted village dwellings is not very difficult to determine. The name of such a hut is *éhen*, which is the word also used for the portable barrel-vaulted dwelling of Ayr pastoralists, and there is often very little difference between small barrel-vaulted huts and the portable dwellings of pastoralists. But barrel-vaulted huts of sedentary people have adopted some of the structural elements found in beehive huts. Most barrel-vaulted huts of the [462] Ayr villages can be described as a hybrid type of dwelling, which seems to have been adopted as a result of contact with pastoralists, largely because village farmers have married pastoral women, for barrel-vaulted huts, like beehive huts, are built by women, and portable barrel-vaulted dwellings are also made by women among pastoral Tuareg.

The following is the structure of a normal barrel-vaulted hut of the Ayr villages:

(1) Three arches made of slender rods of *ébizgen* (*Salvadora persica*), or from midribs of palm leaves, which are lashed together in a bundle. These arches are similar to those used for beehive huts (cf. A.8.c.) and they are also called *igegan* (sing. *egegu*).

(2) The three arches are fastened to short heavy poles (*iseḳtan*, sing. *aseḳtu*) buried in the ground on the same system as that used for beehive huts, but the arches are placed parallel to one another, and the middle arch is higher than the two outer arches.

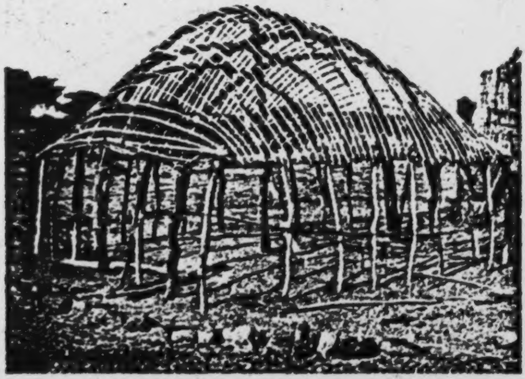

Fig. 260. The wooden skeleton of a large *éhen* hut. Ayr, Azzal.

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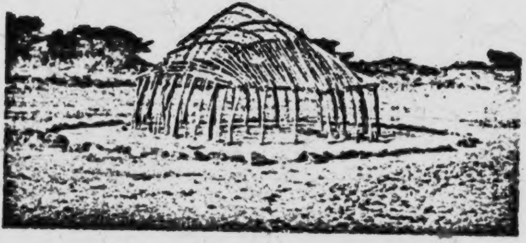

Fig. 261. The wooden skeleton of a large and very high *éhen* hut. The stone-ring serves to keep pebbles and impurities away from the dwelling. Ayr, Azzal.

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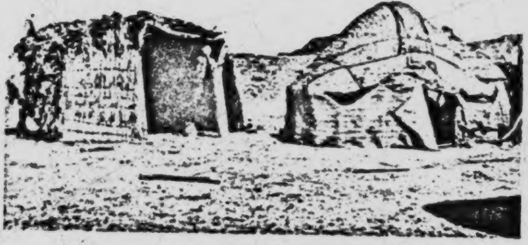

Fig. 262. An *éhen* hut covered with mats like those used for barrel-vaulted dwellings among pastoral Tuareg of Ayr (right). To the left a *séjira* hut. Behind the *éhen* hut a glimpse of a beehive hut (*tatγamt*). Many dwelling types are often found within a single village in the Sahara. Ayr, Awderas.

(3) To the three arches are now added two crossbars (*isgar*, sing. *éseger*), resting horizontally in slender forked sticks (*iseḳtan*, sing. *aseḳtu*) which are fixed vertically in the ground. The two systems of crossbars are placed parallel to the three arches to constitute the narrow sides of the hut structure. The number of vertical sticks supporting a horizontal cross-bar vary.

(4) A number of slender rods (*ilellewan*, sing. *alellewa*), which, as a rule, are made from midribs of date palm leaves, are fastened to the horizontal crossbars and to the arches which they cross at a right angle. These rods, or semi-arches, are fastened in the same way as described below for barrel-vaulted dwellings of pastoral Tuareg.

The main structure of a not too large barrel-vaulted hut as that just described is very akin to that of the portable barrel-vaulted dwelling of Ayr pastoralists, but very large huts of the Ayr villages

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have a more elaborate structure as will be seen from the illustrations Figs. 260 & 261. A large hut may have even five or seven arches of different height, there may be up to ten sticks to support the rather long horizontal cross-bars, and the slender rods or semi-arches fastened to the cross-bars and to the arches may be as many as about 40, each rod being actually made from two pieces fastened to each other at the middle arch. In such very large huts there will always be a central post (*tègettewt*), which is forked at its upper end to support the middle of the central arch and thus the whole structure. The central post is the last structural element to be inserted. It is pressed against the middle of the central arch and is thereupon buried in the ground. 342*

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Barrel-vaulted huts of the *éhen* type are normally covered with mats plaited from dum palm leaves similar to the mats used for portable dwellings of the same type (cf. Figs. 262). But the lower parts of the hut may be covered with a simple mat plaited of *afezu* grass (*Panicum turgidum*) identical with the mat which covers the lower part of a beehive hut. To fasten a grass mat of this kind it is necessary to attach a number of horizontal rods (*ilegwan*, sing. *élaweg*) to the vertical sticks supporting the horizontal cross-bars, and to the lower parts of the arches at the two long sides. 342* 285

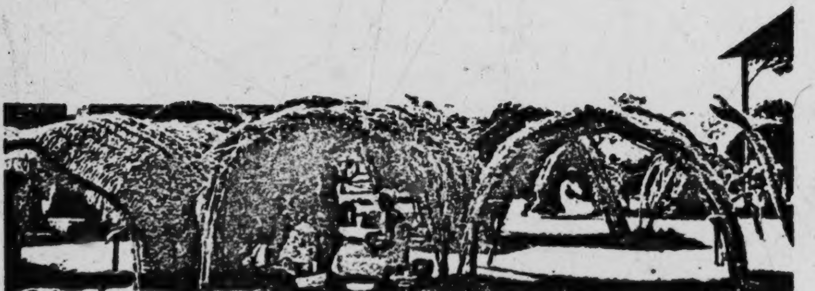

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Fig. 263. True barrel-vaulted structures covered with plaited mats and used for market-stalls by the Sonray of Ayoru on the Niger.

B. PORTABLE DWELLINGS

*342 [121] Portable dwellings represent a great diversity of types among pastoral Tuareg. I speak of all these dwellings as "tents". For practical reasons I distinguish between "mat tents" and "skin tents", and to make it easy to refer to definite types I give them particular numbers. I believe that most portable dwellings of the Tuareg *are* historically related to each other and the problem of historical development is considered later in this chapter.

B.1. *Mat Tents*

285 *342 Mat coverings are nowadays used only in Southern Tuareg groups, but they were formerly known also to the Northern Tuareg, for Duveyrier states that the Northern Tuareg may use for their tents a covering *éhen* "en tissu de chaume" (Duveyrier 1864, p. 403).

Tent mats are of two different types, the more common one being that made from dum palm leaves plaited into long narrow bands which are sewn together with strips of the same material by means of a large needle (cf. Fig. 220b). Mats of this type are collectively known as *asala* (pl. *isalan*). The innermost mats which cover the upper part of the tent among the Ayr Tuareg and the *Kel Geres*, among whom dum palm mats always form the main covering, are made from pieces of straw or similar material which are not plaited, but are attached horizontally to one another by means of thread in much the same way as the mats described p. 269, that is like mats of the *éseber* type. Where dum palm material is not available the tents may be covered exclusively with mats manufactured in this way, and a tent of this kind may then be referred to as *éwerwer* (pl. *iwerweren*), the word used for tent mats of this type. The *éwerwer* type of mat tents is described from the *Kel Dennek* country (Nicolas 1950a, p. 156 f., Fig. 31a–d), and it seems as if tents exclusively covered with mats of *éwerwer* type also occur among the *Bélla* along the Niger (cf. Chudeau 1909, pl. XXXII & XXXIII p. 218).

*342 [114] My knowledge of Tuareg mat tents derives from my studies among the Ayr Tuareg, the Ahaggar Tuareg living in or close to the Ayr Massif, and the *Kel Geres*. Mat tents used among these Tuareg are largely identical, and the material I have collected in these Tuareg groups will now be presented:—

B.1.a. This is a mat tent like that generally used among the *Kel Ayr*. It has an elaborate structure:—

(1) Three wooden arches each consisting of two curved pieces of wood, lashed together when the tent is erected. These three arches are placed in the middle of the tent at right angles to its longitudinal direction. The two curved wooden pieces which together constitute an arch are not of equal length. The arch piece which is fixed in the soil at the frontal side is very long, while the other curved piece attached to it and buried in the ground at the back is shorter. The short curved arch-pieces of all three arches are known as *ineggebela* (sing. *aneggebalu*), while the three long wooden arch-pieces to which they are attached have different names. The curved frontal piece of the middle arch, higher than the two outer arches, is called *teḳḳeḳḳewat* (pl. *teḳḳeḳḳewatin*). The frontal arch-pieces of the two outer and lower arches are known as *t'ilisawin* (sing. *t'ilisawt*). These latter names are also used to designate the erected arches made from the arched pieces lashed together, so that the central arch is referred to as *teḳḳeḳḳewat*, while the two lower arches are called *t'ilisawin*. – The curved pieces

- The curved pieces

lashed together to form arches are manufactured by the Ayr women, or are imported from the south 342* by the *Kel Geres* Tuareg when they visit Ayr at the end of the rains. The arches manufactured by the [462] Ayr women are made from the very long horizontal roots (*tékéwt*) of the *afagag* acacia (*Acacia Raddiana*). [824] Pieces of root of suitable size are placed over an open fire for a while, and are thereupon bent [335] into the desired curve which is secured by cords. When the root pieces thus treated become dry they will retain their curved form; the cords are then untied and the root pieces fashioned with a knife. However, wooden arches imported by the *Kel Geres* are used by many Ayr Tuareg who claim that these arches are superior to their own. They are said to be manufactured from boughs (or roots?) of a tree known as *tarmumiya*, which does not grow in Ayr but in the *Kel Geres* country.

(2) Parallel to the three arches there are two pairs of cross-bars supported by vertical sticks, a pair being placed at both sides of the arches to form the narrow sides of the dwelling. These cross-bars are termed *isgar* (sing. *éseger*). They are sometimes made by blacksmiths, and are then provided with [531] various ornaments including a little discus-like thickening carved at the middle of the bar. In fairly large tents each cross-bar is supported by four vertical sticks, the two middle ones of which are generally forked, while the two outer sticks are somewhat higher and attached to the cross-bar with cords. All these vertical sticks, including the outer ones which have no prongs, are termed *tigettewin* (sing. *tégettewt*). In smaller tents there are only two or three sticks supporting the cross-bar. The vertical sticks used to support the cross-bars are normally very simple. Sticks of the very light *turza* tree (*Calotropis procera*) are preferred.

(3) Over this skeleton of arches and cross-bars supported by vertical sticks are placed a number of slender curved rods which are termed *ilellewan* (sing. *alellewa*). These rods are made from acacia roots, as described above, or are rods of the *tarmumiya* tree imported from the south. These rods form semi-arches in the longitudinal direction of the tent. Each of these semi-arches consists of two identical rods fastened to the horizontal cross-bars at their thick end, while at their thin ends they are lashed together and fastened to the true arches. There is always a considerable number of these slender semi-arches, normally about ten.

The Ayr Tuareg use the following types of mats to cover the upper part of the dome-shaped 342* structure:— *iwerweren* (sing. *éwerwer*), the mats made from plant stems tied to each other with leather 285 thread (cf. p. 350); *isfal* (sing. *ésefel*), mats of an oval shape plaited from dum palm leaves; *asalemamas*, a long narrow piece of mat made from dum palm leaves. In addition there is the term *éreli* which designates the long narrow mat plaited from dum palm leaves surrounding the lower part of the tent structure. In very hot weather this mat is omitted so that currents of air may pass through the dwelling, while the tent is closed when it is cold, or during storms. A tent as that described has 342* a dome-shaped or barrel-vaulted superstructure, the ground-plan being almost rectangular. A tent of normal size will measure about 3.00×4.50 m with a height of 1.80 to 1.90 m.

The mat tent is erected by one or two Tuareg women in the following way:— [462]

(1) The ground is cleared; (2) The large wooden bed (*tédabut*), which is used everywhere in the [352] south, is placed upon the ground to facilitate measuring; (3) Two large pronged posts, which serve [353] to carry woman's riding cushions and various large skin bags, are placed behind the bed and fixed into holes dug by means of some iron implement, e.g., the cooking tripod, the broad end of a lance,

[text continues on p. 353]

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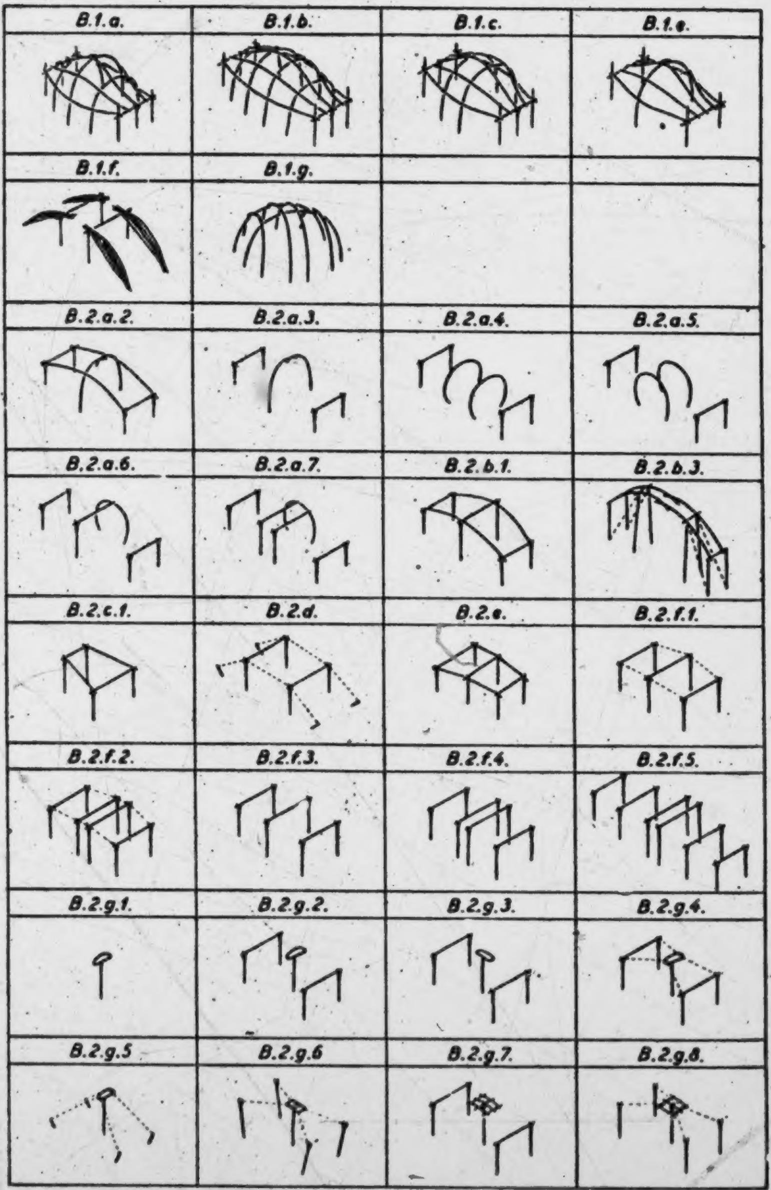
B.1.a.
B.1.b.
B.1.c.
B.1.e.
B.1.f.
B.1.g.
B.2.a.2.
B.2.a.3.
B.2.a.4.
B.2.a.5.
B.2.a.6.
B.2.a.7.
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B.2.b.3.
B.2.c.1.
B.2.d.
B.2.e.
B.2.f.1.
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B.2.f.3.
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B.2.f.5.
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B.2.g.2.
B.2.g.3.
B.2.g.4.
B.2.g.5
B.2.g.6
B.2.g.7.
B.2.g.8.

Fig. 264. The main types of Tuareg mat tents (B.1.a–B.1.g) and skin tents (B.2.a.2–B.2.g.8).

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or a large chopping knife of European origin; (4) Holes are dug with one of the implements mentioned 342* in front of the bed and behind it, and the curved wooden pieces forming the arches are placed in these holes and are lashed together at their upper ends. These holes are 0.30–0.35 m deep; (5) Holes of the [284] same depth are dug for the vertical sticks which support the cross-bars at both sides of the arches, the cross-bars being attached to the vertical sticks by means of cords; (6) A long cord is wound around the high middle arch so that the cord forms tight loops along the upper part of the arch; (7) The slender semi-arches, each consisting of two rods, are placed in the loops of the middle arch from both ends; (8) The thick ends of these rods are attached to the cross-bars with cords; (9) The upper ends of these rods are attached to each other to form semi-arches, and the wooden structure is now finished; (10) Two mats of the *ĕwerwer* type, which form the inner layer of the roof, are laid over the semi-arches; [285] (11) Dum palm mats of oval shape are placed upon these mats; (12) A long and narrow dum palm mat is drawn over the tent following its longitudinal direction; (13) The mats are fastened to the wooden structure by means of a cord running over the high central arch at right angles to the longitudinal direction of the dwelling; (14) An oval dum palm mat is placed on each side of the high central arch, and these two mats are fastened to the wooden structure with cords attached to the two lower middle arches; (15) A long narrow dum palm mat is drawn over the tent along the high middle arch at a right angle to the longitudinal direction; (16) All mats covering the upper structure of the tent are finally fastened by means of a cord system running all over the roof and attached to the horizontal cross-bars and the lower parts of the arches; (17) The long narrow dum palm mat is drawn around the lower part of the tent if considered necessary.

The mat tent is normally erected as here described, but all women do not erect their tents exactly 342* in the order mentioned. The work seems to be very easy to the women who measure no distances. 461 They seem to carry out their work automatically. I have not been able to control the amount of time needed for one or two women to erect a mat tent of the type mentioned, for the women are frequently interrupted in their work by many other household duties, by their crying babies, or by visitors from other camps, but I believe that one woman can erect this elaborate tent structure in about half an hour.

There are some mat tents which are slightly different in structure from the above-mentioned tent. 342* These are mentioned below:—

B.1.b. Tents which are larger and have a more elaborate structure. Such tents are rare and are found mainly in the camps of chiefs. They may have four or five arches and a larger number of semi-arches than other tents. I have seen very large tents in the camp of the *Kel Ferwan* drum-chief, and [134] the largest tent I have seen was that of the *Kel Gĕres* drum-chief. It contained two large beds and measured about 6.00 × 3.50 m; it was over two metres high at the middle arch.

Mat tents of a less elaborate structure are not so rare. The following types can be mentioned:—

B.1.c. A tent structurally identical with B.1.a with the exception that it has only two arches which are of equal height. These arches are then both known by the term *teḳḳeḳḳewatin* (sing. *teḳḳeḳḳewat*). Tents of this type with only two arches seem to be common among the *Ifoṛas* tribes of Southern Ayr.

B.1.d. A tent with two slender arches of equal height, secured in an erect position by means of cords from the middle of the arches to the middle of the horizontal cross-bars. This is not a common [184] type, and I have seen only one such dwelling in a vassal camp of the *Kel Ferwan* drum-group.

[text continues on p.356]

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The Erection of a Mat Tent in Ayr.

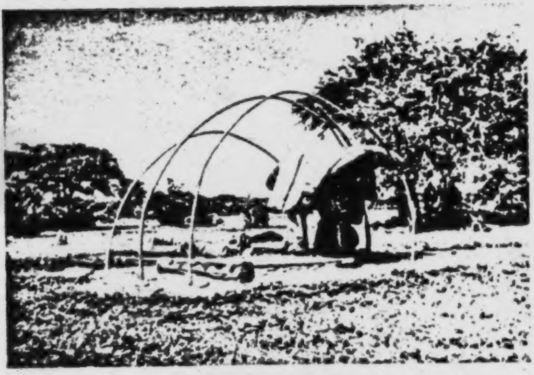

Fig. 265a. The wooden bed (*tédabut*) is placed upon the cleared ground. The pronged posts carrying riding cushions, skin bags, etc., and the curved wooden pieces constituting the three arches known as *teḳḳaḳḳewat* and *t'ilisawin* are buried in the ground. The cushions and decorated skin bags resting in the heavy wooden prongs are temporarily covered with tent mats that their colours may not be damaged by sunshine.

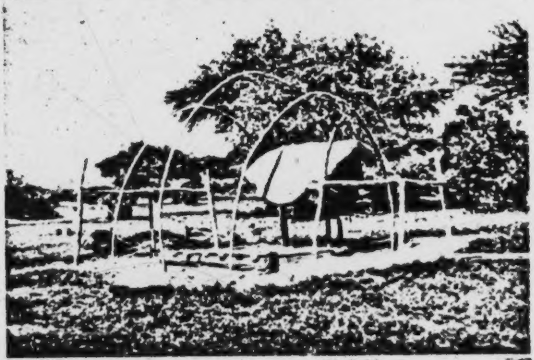

Fig. 265b. The arch pieces are lashed together and the two horizontal cross-bars (*isgar*) are fixed to vertical sticks (*tigettewin*) buried in the ground at the narrow ends of the tent. A little discus-like thickening carved at the middle of each cross-bar is seen on this photograph.

[284]

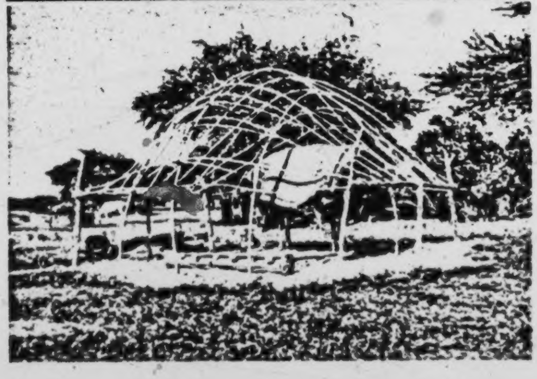

Fig. 265c. A long cord is wound around the high middle arch to form loops for the insertion of the slender rods forming semi-arches in the longitudinal direction. The thick ends of these rods are fastened to the cross-bars but are not yet lashed together at their upper, narrow ends.

The Erection of a Mat Tent in Ayr.

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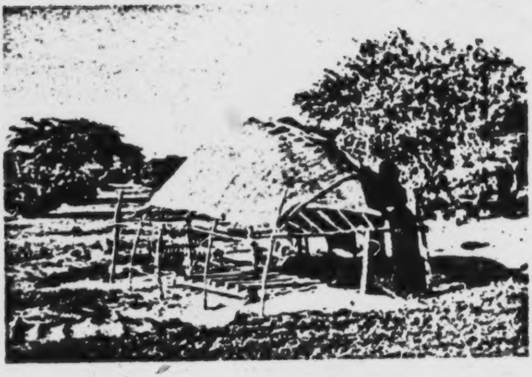

Fig. 265d. The narrow ends of the pieces of longitudinal semiarches are lashed together. The tent structure is now finished to be covered with mats. The interior cover consisting of two rectangular mats made from plant stems and known as *Iwerweren* (sing. *éwerwer*) is seen on this photograph.

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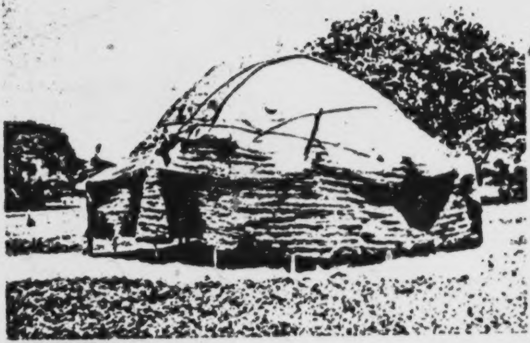

Fig. 265e. The dum palm mats of oval shape (*isfal*) and the long narrow dum palm mats (*asalemamas*) are placed over the *Iwerweren* mats and are tied to the dome-shaped structure with cords. The narrow dum palm mat (*éyeli*) surrounding the lower part of the tent is fixed to the structure.

[133]

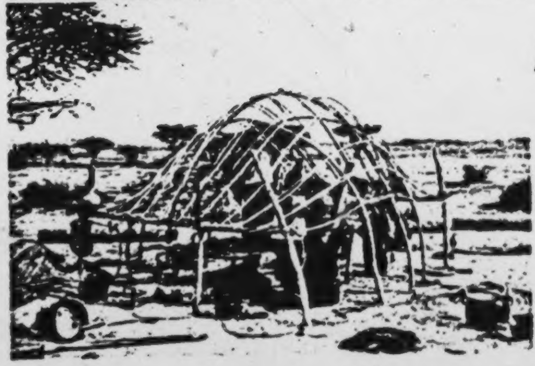

Fig. 265f. The mat tent is taken down for erection in a new place. The woman standing within the structure is loosening the looped cord which keeps the semi-arches to the high middle arch. It is not the same tent as that depicted Fig. 265a–e but the two tents belong to the same camp of the *Imezzureg* tribe near Agadez in Southern Ayr.

*342 [166] [197] B.1.e. A tent which has only one arch. I have once seen a tent like this in a blacksmith's camp close to Agadez, and several in a camp of former Ahaggar Tuareg of the *Tégehé-n-Efis* tribe in Northern Ayr. As this less elaborate structure seems among these Tuareg to constitute a fixed type I shall describe its main elements and the terms used for them which differ slightly from those used in the *Kel Ferwan* group, because the Ahaggar Tuareg living in Ayr even to-day largely speak their old Ahaggar dialect:—(1) A wooden arch at right angles to the longitudinal direction; it is called *agegu* (pl. *igegan*). (2) Two horizontal cross-bars known as *éseger* (sing. *isgar*). (3) Forked sticks called *tigettewin* (sing. *tégettewt*) to support the horizontal cross-bars. There are only two forked sticks for each of the two cross-bars. (4) Slender rods forming semi-arches along the longitudinal direction; these are known as *ilèllewatin* (sing. *alellewa*). This very simple structure is covered with mats much like other mat tents, the mats being known collectively as *asala* (pl. *isalan*).

Two very particular types of mat tents differing greatly from the above remain to be mentioned:—

[484] B.1.f. During migrations when the members of a camp remain only one or two days on the same spot, they do not always erect mat tents. But they have to do so throughout the rainy season, when the tents are sometimes erected in a very peculiar way:— The two horizontal cross-bars are placed parallel to one another, each of them resting upon two forked sticks. The distance between the two cross-bars is about one metre, and the height of the two pairs of forked sticks is about 1.50 m. The rest of the elements constituting the normal tent structure, that is the bundles of arches and semi-arches, is not untied. The parcels made up of these elements are leaned against the horizontal cross-bars, and the whole is thereupon covered with mats. The tent erected in this way is a very small one, just big enough for the large wooden bed (*tédabut*). The tent thus erected is known as *tafala*.

B.1.g. The tent to be mentioned is known as *éhen* like the normal barrel-vaulted mat tents, but [184] it is nevertheless of beehive shape. This type of dwelling, however, is not used among the Ayr Tuareg, and I have only seen it once in the camp of the *Kel Geres* drum-chief, where many slaves lived in small mat tents of beehive shape. The structure is made of slender, unfashioned boughs which are fixed in the ground and tied together at their tops. But the arrangement is not a fortuitous one. It would seem that these dwellings have a particular structure: two arches placed parallel to each other and four slender arches passing over the two first arches at a right angle. This structure is covered with mats plaited from dum palm leaves. The tents are very low with a height of about 1.50 m, and their diameter does not exceed 2.00 m. Portable tents of beehive shape are unknown to true pastoral Tuareg.

Mat tents of arch construction are known outside the regions inhabited by the Ayr Tuareg and the *Kel Geres*. They seem to occur throughout Southern Tuareg country, but are less common further west than among the *Kel Ayr* and the *Kel Geres*. The great majority of the pastoral Ayr Tuareg live in mat tents, and it is not correct to speak of this type of portable dwelling as typical of the *Kel Ewey* as frequently happens in literature. As to the *Kel Geres* they claim that all pastoralists of their group have mat tents. On the occurrence of mat tents outside the *Kel Ayr* and the *Kel Geres* I have gathered the following information from literature:—

A mat tent of arch construction is described by Nicolas from the *Kel Dennek* Tuareg around *Tawa*. It is called *awagwag* or *awarwår* (*éwerwer*) because it is covered with mats of this particular type (cf. p. 350 f.). A tent of this nature is 6–7 metres long and 4–5 metres broad. The tent has four, three,

Songhai MS20

or two arches according to its size. The arches are known as *igagan* (sing. *agĕgu*). They consist of several rods lashed together with plant material. According to Nicolas, these tents are used by semi-nomads and also by members of the *Kel Anaw* tribe who live half of the year in the southern agricultural zone where they use mat tents. The rest of the time these Tuareg live in skin tents which form the traditional dwelling of the *Kel Dennek* (Nicolas 1938, p. 62; 1950a, p. 156 f.).

T 342*

Many other authors have mentioned the existence of mat tents of arch construction in Southern Tuareg country, but no description of their structure has so far been furnished.

Barth states that Tagâma and many vassals of the *Iwllemmeden* have portable huts covered with mats (Barth 1857–58, I, p. 372 f.). He adds that the inhabitants of these dwellings have fairer skins than the *Kel Ewey* Tuareg (Barth 1857–58, I, p. 597 f.). Barth also mentions the occurrence of mat-covered dwellings at an Isaḱbegen camp on the Niger between Burem and Gao. These dwellings belonged to Arabs of the *Bû 'Ali* tribe, and to Tuareg of the *Kęl-e'-Ssûk*. The mat-covered huts had two openings turning north and south (Barth 1857–58, V, p. 201).

T [142]
T [171]

Hourst depicts mat-covered arched dwellings at Rhergo on the Niger. One of his photographs shows a hut which, judging its outer form, is perhaps identical with the mat-covered tent of the Ayr Tuareg and the *Kel Geres*. The dwellings depicted by Hourst belonged to dark-skinned cherifs of the noble Tuareg tribe called *Igwadaren* (Hourst 1898, p. 105 ff., 133).

Chudeau depicts mat-covered arched dwellings belonging to the *Bélla* of the Niger. These dwellings apparently belong to the *ėwerwer* type (cf. p. 350 f.) (Chudeau 1909, p. XXXII–XXXIII p. 218).

Delafosse states that the Tuareg have hemispherical dwellings covered with mats (Delafosse 1912, I, p. 334).

Le Coeur has seen mat-covered arched dwellings at Gao and at Tabankort south-west of Adrar of the Ifoŗas (Le Coeur 1937, p. 42 f.), and a photograph in the collection of Musée de l'homme seems to indicate that such dwellings are found in "Adrar Nigritien" (Collection Photographique du Musée de l'homme, Cl. Nieger, 34.1105).

Gabus says that among the Tuareg of the Niger the *Bélla* live in mat-covered tents. The noble Tuareg have skin tents, but they live in mat-covered tents or in straw-huts during the months of April, May, and June (Gabus 1945, p. 361).

We can add that the Soŋay, who live within the Southern Tuareg country along the Niger, also largely use mat-covered arched dwellings. This is richly documented in literature:— Barth 1857–58, V, p. 160, 163, 165 f.; Dubois 1897, p. 232 f. & 1911, p. 33; Aymard 1908, p. 183 & 1911, p. 144 pl. 25; Olufsen 1928, p. 137; Urvoy 1942, pl. II, 3; Gabus 1948a, p. 10 & 1948b, p. 15; Prost 1954, p. 184 ff.; Rouch 1954, p. 31 f.). These barrel-vaulted mat-covered dwellings of the Soŋay do not seem to be structurally identical with those used among pastoral Tuareg – for they seem to lack the horizontal cross-bars at the narrow sides. The mat-covered huts or tents I saw between Niamey and Ayoru along the Niger were covered with a kind of *ėwerwer* mats and almost hemispherical in form – like two mat-covered huts (from the Woggo and the Kurtey) which are now in the IFAN Museum at Niamey. Gabus states as his opinion that the Soŋay dwellings are related to Tuareg mat tents by which they have been strongly influenced (Gabus 1948a, p. 10 & 1948b, p. 15). I believe that their origin may perhaps be explained by the fact that the Soŋay have been culturally influenced by Tuareg invaders

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S 342 [171] [31] [113]
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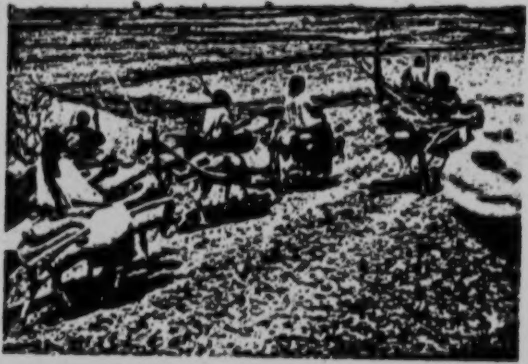

Fig. 266. Three mat tents, three heavy wooden beds, and the household utensils belonging to three households are moved by means of six donkeys. Ayr, the *Imezzureg* tribe.

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*342 from the north from very ancient times (cf. p. 412), and, according to Rouch, we find that mat-covered
171 barrel-vaulted huts do not constitute the traditional type of dwelling of all Sonṛay, but are found
S along the Niger between Timbuktu and Asongo, while the Sonṛay living outside of this area have
342 other dwelling types (cf. Rouch 1954, p. 31). Thus we see that Sonṛay mat-covered arched dwellings
177 are found precisely within the area which has been most strongly influenced by Tuareg culture, namely
S the upper part of the Niger Bend. It can be added that such dwellings do not seem to be typical of
[462] other African peoples who lead a predominantly sedentary life. Furthermore, Sonṛay mat-covered
barrel-vaulted dwellings are built by the women, who are also the true owners of the huts (cf. Rouch
1954; p. 31). In this we find another parallel to traditional Tuareg custom.

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*342 We see again how wrong it is to speak of the Ayr Tuareg mat tent as a dwelling particular to the *Kel Ewey*, for such mat-covered tents are used by most Ayr Tuareg from the northern outskirts of the Massif to Damergu; it is said to be used exclusively by the *Kel Geres*; it is known among certain *Kel Dennek*, among the *Iwllemmeden Kel Ataram* and their *Bélla*, and apparently even in the southernmost parts of the *Kel Adṛaṛ* country. Arched mat tents on the southern outskirts of the very vast area inhabited by Tuareg occur in an almost unbroken line in a huge semicircle running from Northern Ayr to Timbuktu.

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171 This distribution may perhaps indicate that the mat tent is of very ancient standing among the Tuareg. We have mentioned above that the mat-covered arched dwellings of the Sonṛay may have been adopted by these people through contact with the Tuareg, and it does not seem as if the latter adopted their arched mat tents as a result of contact with other Sudanese peoples who use barrel-vaulted dwellings. Barrel-vaulted dwellings are not common in the Western Sudan, but are found among certain pastoralists whose arched huts and tents are structurally very different from the barrel-vaulted Tuareg mat tent. This appears from literature about the *Fulani* and the *Toucouleurs* (cf. Urvoy

1952, pl. II, 4; Desplagnes 1907, pl. CVI p. 396). Various pastoralists within the huge area of Tibesti, 342*
Borku, and Ennedi also use barrel-vaulted mat-covered tents. These are very different from Tuareg 171
mat tents (cf. Biasuti 1933, Fig. 2, p. 173; Despois 1946, pl. XXII; Le Coeur 1937, p. 39 & 1950,
p. 192, pl. XXVI, 99; Schiffers 1957, pl. IV; Kronenberg 1959, pl. III; Fuchs 1961, p. 18 ff., pl. IV).
However, a mat tent described in detail by Chapelle has a structure which includes pronged sticks
and horizontal bars (Chapelle 1957, p. 227 ff.), and a Tebu tent from Bilma now in the IFAN Museum
at Niamey resembles the mat-covered Ayr tent in having two horizontal cross-bars at the narrow
sides – each bar resting upon seven vertical pronged sticks.

We presume that Tuareg mat tents constitute a very ancient and traditional type of dwelling, which, 342*
perhaps, was originally covered with mats of grass-stems (cf. p. 350 f.). We venture to advance this [174]
theory, the more so as other types of Tuareg tents less elaborate in their structures show very close
affinities with the arched mat tent. Our theory, however, gives rise to one important question:— Is 182
the elaborate structure of Tuareg mat tents well fitted to pastoral life? 342*

It is evident that some of the Tuareg, who live in mat tents, and notably the *Bélla*, are semi-nomads,
and Capot-Rey says that "– – les populations qui l'ont adoptée ne se deplacent presque plus; – –"
(Capot-Rey 1953a, p. 222). This is not correct. Mat tents like that described in B.I.a. are used by [221]
true nomads, who move much during the rainy season to find the best annual pasture for their domestic
animals. At that season many pastoralists move their camps of barrel-vaulted tents about once a
week, and though some of them prefer to erect their tents according to the simple *tafala* method (cf.
B.I.f., p. 356), most nomads will erect the tent in the ordinary fashion. It may be added that even the
Kel Geres who come to Southern Ayr at the end of the rains have with them their mat tents which
they erect correctly. There are, it is true, many Tuareg possessing mat tents who remain almost on
the same spot throughout the year, but this is equally true of many Tuareg with skin tents. The mat
tent is a true pastoral dwelling type. It is not very difficult to put up though it takes more time than
does the erection of most skin tents. It is also not very difficult to transport the comparatively elaborate 182
structure of normal mat tents. With few exceptions the pastoral *Kel Ayr* who live in and around the 342*
Massif use donkeys for tent transportation. The light tent mats are simply used as a kind of pack- 442
saddle, being rolled up and placed over the back and along both sides of the pack-animal. The curved
boughs and rods which form arches and semi-arches, and the comparatively few vertical sticks with
the two cross-bars are tied up into parcels which are fastened over the mats at the animal's sides. I
have frequently seen a tent, together with the very heavy wooden bed (*tédabut*) and various domestic
utensils, being transported by two donkeys, and a normal tent can be transported by a single donkey
without much difficulty. As a further indication of this I produce a photograph showing the move- [484]
ment of a camp comprising three ordinary tents, three wooden beds, and the necessary household
implements and provisions, and it will be seen that all this is transported by six donkeys (cf. Fig. 266).
On the whole, an ordinary mat tent is neither very difficult to erect, nor difficult to transport. It is 182
more difficult to erect the mat tent than the skin tent, but skin tents very often constitute a heavier 342*
burden. The sheet of skin, or more correctly leather, is heavier than the covering of mats, and though
it is true of many skin tents that they have a less elaborate structure than the mat tents, the former
need a system of pegs and poles to fasten the sheet, and these have to be transported except where

182 suitable natural boughs are abundant. There are advantages and disadvantages in mat tents as well
*342 as in skin tents. During the very hot season the mat tent is by far the best type of dwelling; it is
comparatively high and the mat covering is not heated to any great extent by the sun. During the
[132] rainy season the mat tent is less practical than the skin tent. Rain may fall so heavily and abundantly
that it penetrates the mat covering, and even if it does not it will be necessary to remove all mats after a
heavy shower in order to dry them in the sun. The skin tent is normally erected quicker than the mat
tent, it protects efficiently against rain, but is, on the other hand, most unpleasant during the hot season.

[124] It does not seem possible to explain the distribution of mat tents and skin tents on purely geographical
grounds, but it seems as though the mat tent is used mainly where dum palm leaves for plaiting
are available. Where the dum palm disappears, the mat tent tends to disappear also, though mat tents,
as we have seen, may be provided with a covering of *éwerwer* type (p. 350 f.). Outside of the dum
palm area most Tuareg have skin tents for portable dwellings. Within the dum palm area mat tents
and skin tents are mixed in certain regions, and it has been seen that certain Tuareg use mat tents
during the very hot season before the rains, but adopt skin tents when the rains start. This seem to
[237] indicate clearly the advantage and the disadvantage of the two dwelling types. But the advantages
of both dwellings can be obtained in another way, namely by placing a sheet of skin over the top of
the mat tent in the rainy season. This is actually done by many Tuareg. I was told that the *Kel Foday*
Tuareg around Ingal very frequently cover their mat tents with skin during the rainy season, and
remove the skin again when the rains are over. It is perhaps this to which Rodd refers in a brief note
on Tuareg tents in Ayr (Rodd 1926a, p. 212), and we may be sure that the usage is a very ancient
one in these regions, for it is mentioned already by Ibn Batutah in reference to the *Bardamah*, who
are stated to be nomads that frequently move their camps (cf. Ibn Batutah IV, p. 437). The custom
of covering mat tents with a sheet of skin has also been noted in the case of the *Iwllemmeden* Tuareg
by Barth (Barth 1857–58, I, p. 597 f.). It is very possible that it is still more widely known in Southern
Tuareg groups, as it allows in an easy way the advantages of both types of dwellings.

B.2. *Skin Tents.*

*342 Skin tents are used by Tuareg in all groups, though there is some doubt as to the use of skin tents
184 among the *Kel Geres*. I have myself previously stated that they have skin tents (Nicolaisen 1959, p. 118),
this statement being based on information gathered in Ayr 1955. Lhote also mention that some *Kel
Geres* use skin tents, while other pastoralists in this group own mat-covered tents (cf. Lhote 1947a,
p. 79, phot. 51 p. 80–81). But when I visited the camp of the *Kel Geres* drum-chief in 1959 he claimed
that the *Kel Geres* always live in mat tents. As to the *Kel Ayr*, skin tents are very rare among them.
In all other Tuareg groups skin tents play a very important role. They constitute so to speak the only
kind of portable dwellings among the Northern Tuareg and the *Kel Adγaγ*, and they form the most
common type of tent also in the two groups of *Iwllemmeden* Tuareg. Zeltner says that the dividing
line between skin tents and mat tents in Southern Tuareg country follows the Paris Meridian (Zeltner
1914a, p. 364), but there is in fact no true dividing line between these dwelling types, which are sometimes
used by the same people at different seasons, and the two tent types are sometimes combined
into one, as mat tents may be covered with skin throughout the rainy season.

Tent skins derive from domestic animals or from game animals. In older literature one can find 342* a reference to Tuareg tents made of a sheet of camel skin (cf. Denham & Clapperton 1826, p. L). 281 However, we have already seen that the Tuareg do not tan camel hides and they are not used for tent sheets. The Northern Tuareg use the skin of goats, sheep, zebu-calves, barbary sheep, antelope, and gazelle. Goat skin is most commonly used, skin of barbary sheep is considered the very best type of tent skin, while gazelle skin is rarely employed as it is very thin. According to Lhote, the *Kel Adraṛ* Tuareg generally use the skin of barbary sheep (Lhote 1947a, p. 108). The Ayr Tuareg use the skin of goats, sheep, and zebus. It is most possible that some Tuareg also use skin of game animals, but [224] most Ayr Tuareg engage very little in hunting, though barbary sheep are very common in certain parts of the Massif. In the southern plains of the *Iwllemmeden* there are no barbary sheep. According to Nicolas, the *Iwllemmeden Kel Dennek* use for their tents the skin of sheep, goats, gazelle, and sometimes even the skin of ostriches, but they do not use zebu skin which becomes very hard and shrinks when heavily moistened during the rainy season (Nicolas 1938, p. 54 & 1950a, p. 155). The *Iwllemmeden* and their *Bélla* of the Ayoru region use the skin of goats and sheep for tent-sheets.

Tent skins are prepared in the same way as skins used for transportation bags, dress articles, and the like. They are depilated and tanned according to the methods described on p. 275 ff. After tanning they are treated with butter, and are thereupon soaked to be rubbed and coloured with red ochre, these treatments making the skins impervious to water. A tent sheet is always made of several pieces [283] of skin which are sewn together with leather thread by means of a little awl known as *tistent* (Ahaggar), [413] or *éstan* (Ayr). The edges where the skins have to be sewn are made even with a knife, while the outer edges of the sheet are left largely unfashioned so that the circumference of the sheet is of very irregular shape with protruding patches of leg or neck skin. These patches of skin frequently serve for the attachment of the cords by means of which the sheet is suspended. When two pieces of skin are sewn together a narrow leather strip is inserted between their edges before sewing. Loose ends of leather [531] thread hang down from the inner side of the sheet to serve as a kind of decoration, and in Ahaggar the tents are also frequently ornamented with hanging patches of leather with a carved decoration (cf. Fig. 182). On the whole the Tuareg of Ahaggar take a great interest in their tents. They like to 342* have richly-decorated dwellings, and when a tent is made for a newly-married couple, the women 281 do their outmost to make the sheet very beautiful. These aestethic feelings seem to be unknown in 517 regard to other types of dwelling used among the Tuareg, including the mat tent, and I think that they are responsible for some Tuareg using skin tents even when other dwelling types would be more suitable. I believe this to be true, the more so as the skin tent among the Northern Tuareg plays a [585] great part in the wedding ceremony, which is called *éhen*, that is "a tent".

It is evident that the number of skins to be used for a sheet greatly varies; if a sheet is made from 342* goat skins it may be estimated that a tent of normal size in Ahaggar comprises about 35–40 skins, 281 but very large tents with sheets of 60–80 skins are found among rich noble Tuareg and also in the *Dag Ṛali* tribe. A tent from Ahaggar now in the Ethnographical Collection of the National Museum in Copenhagen has a sheet sewn together from a great many skin patches, and it measures 4.00 × 3.85 metres (N.M., no. G.1; cf. Feilberg 1944, p. 139). This is perhaps to be considered a normal size of skin tents among the Ahaggar Tuareg, though the sheet is generally somewhat more rectangular in

*342 shape. In Southern Tuareg groups the skin tents also vary much in size, but they tend to be larger.
281 Thus it is stated by Nicolas that skin tents among the *Kel Dennek* measure up to one hundred square
metres (Nicolas 1938, p. 54), and Lhote says that 80–150 skins are used for sheets of the very large
tents of the *Tengerregif* Tuareg (Lhote 1947a, p. 100).

[804] The Tuareg themselves do not refer to the size of a tent by counting the number of skins, or by
measuring. The size of a tent is indicated by reference to the number of skin rows in the longitudinal
direction of the sheet, and these rows of skin are known to the Ahaggar Tuareg as *taṛda* (cf. Foucauld
1951–52, I, p. 247 ff.). I have myself seen extremely small tents having a sheet of only three *taṛda*,
but a tent of normal size will generally have four or five such skin rows, and some even have six or
[462] seven *taṛda*. Among the Northern Tuareg the sheet is manufactured in Tuareg camps by pastoral
[567] women and their female slaves. Among the *Kel Dennek*, tent sheets are manufactured by women of
[564] the blacksmith caste (cf. Nicolas 1950a, p. 155).

*342 A mat to be drawn around the lower part of the dwelling constitutes a very essential part of Tuareg
285 skin tents. This mat is generally made from the stems of *afezu* (*afeẓu*) grass (*Panicum turgidum*) tied
together with leather strips as already described. A tent mat at times is divided into two halves which
are rolled up and placed at each of the narrow ends of the tent during hot weather so that currents
[351] of air may pass through. When weather is cold and also when storms are raging, the Tuareg close
their tents with these mats, which may also be drawn out to form a kind of low courtyard in front
of the tent (cf. Figs. 267–269). The straw mat made from *afezu* stems tied to one another is known
as *éseber* (pl. *isebran*) both among the Northern Tuareg and in Ayr, while the name of a tent mat
among the *Kel Dennek* is *šitek̜* (cf. Nicolas 1950a, p. 154), or *chitek̜* according to our transcription
system. Among the Northern Tuareg, tent mats are generally about one metre high, while varying
much as to length. These mats very frequently serve as a kind of wind-screen leaning against poles,

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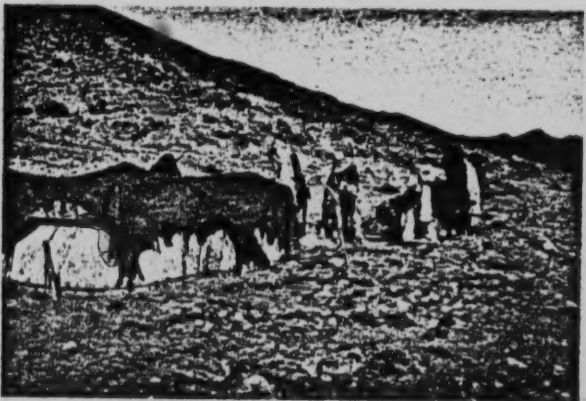

Fig. 267. Skin tent seen from the back. The shape of the sheet is most irregular. Ahaggar, the *Ağuh-en-tehlé* tribe.

[text continues on p. 364]

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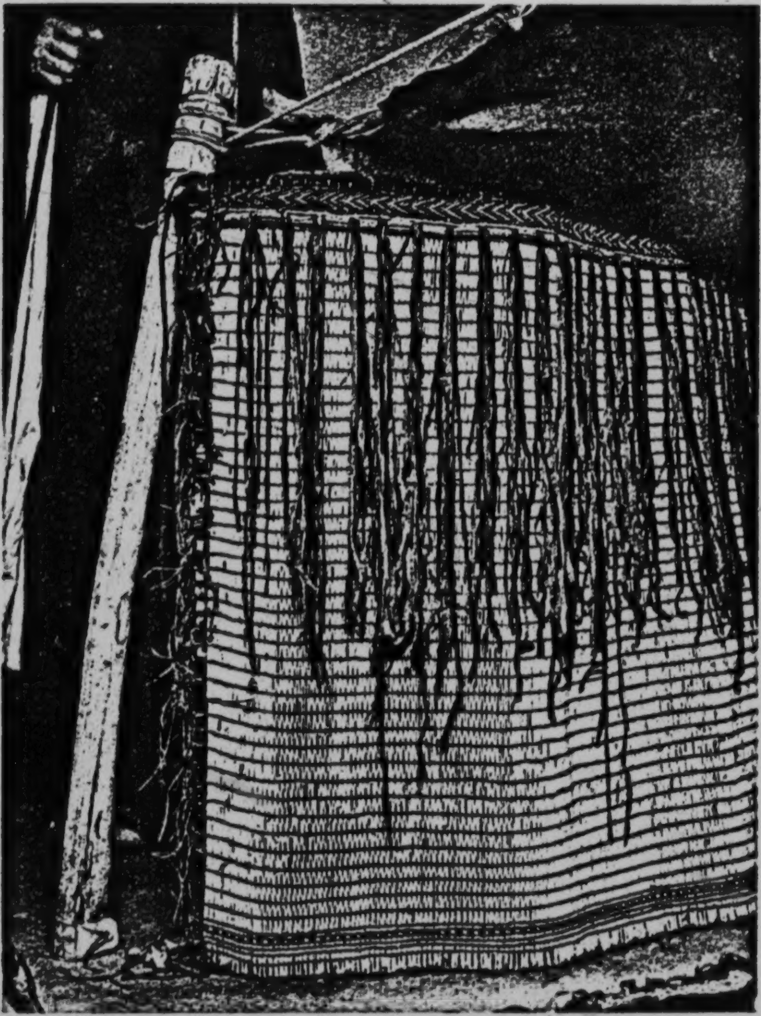

Fig. 268. Mat of *afezu* grass (*Panicum turgidum*) ornamented with coloured leather fringes. The mat belongs to Olufsen's collection from Ahaggar, and the photograph was taken in the Ethnographical Collection of the National Museum in Copenhagen. Dimension: 8,87 × 0.85 m. (N.M. G. 1.4).

*342 285 and a mat-screen of this nature is known as *aṛnes* (pl. *iṛnesen*). It seems as if mats made from *afezu* stems tied to one another with leather thread occur everywhere among the Tuareg who possess skin tents (cf. illustrations of Lhote 1947a). These mats form part of the tent as they constitute its walls. I have only once seen true plaited mats used with a skin tent, and this was not inhabited by ordinary [351] pastoralists, but by blacksmiths (cf. Fig. 272). In addition to tent mats the Ahaggar Tuareg frequently use stone walls (*amuṭey*, pl. *imuṭeyen*) in front of their skin tent during the cold winter season (cf. Fig. 269b).

*342 [281] Among all Northern Tuareg a skin tent is known as *éhen*, and the sheet is called *éhakit*. The *Kel Dennek* Tuareg appear to use the same words for a tent and its sheet (cf. Nicolas 1950a, p. 153) while the Ayr Tuareg reserve the word *éhen* for a mat tent and employ the term *akum* for a skin tent. The Tuareg who use the word *éhen* to designate a skin tent will refer to mat tents as *asala* or *éwerwer* according to the type of mats used for a covering. We see that the word *éhen* is that generally used for a tent among the Tuareg. It is used for skin tents and mat tents alike. The Tuareg who live predominantly or mainly in skin tents use it for these dwellings, while Tuareg who live almost exclusively in mat tents reserve it as a term for their dwelling type.

Mat tents and skin tents may resemble each other in their structures but can also be very different. The mat tent is always an arched tent while this is true only of some skin tents. The main distinction between a mat tent and a true skin tent is that the mat covering is attached to the tent structure, while the sheet of skin is fastened to poles, pegs, stones, or other objects outside the structure supporting the sheet. Among most Tuareg who have skin tents there is a traditional system of poles or pegs for the fastening of the sheet.

In Ahaggar the tent sheet is traditionally fastened to twelve poles which are buried in 0.40–0.50 m deep holes dug by means of the digging stick (*élaweg*; Fig. 123, p. 179), with the broad end of an iron lance, with a wooden stick, and/or the hand. There are three poles in front of the tent, three at the back, and three at each of the narrow ends. These poles have their particular names. The poles placed at the narrow ends are known as *tisdas* (sing. *tasdest*), the poles placed at the back are called *ummusen* (sing. *ummus*), while the three poles placed in front of the tent have different names as follows:— the middle pole, which is higher than the two other poles of this row, is called *iğem*, and the two other poles are known as *madaṛen* (sing. *madaṛ*). The use of these twelve poles is considered the correct method for tent erection, and they are always used in wedding tents; some Tuareg have poles beautifully carved by the blacksmiths, but for ordinary use the Tuareg do not always attach their skin tent to these twelve poles, but frequently use a few poles and attach the sheet to heavy luggage and the like, and at the back they may even place heavy stones upon the skin sheet. The poles placed at the narrow ends of the tent, known as *tisdas*, are also frequently substituted by small wooden pegs termed *tisettitay* (sing. *tasettitit*), and the sheet is then very close to the ground at the narrow ends. This same system of poles and pegs for fastening the skin sheet outside of the proper structure of the dwelling is also known to the Ahaggar Tuareg who live towards the south in the Tamesna plains, to the Tuareg of Tasilé-n-Ajjer, and also, I believe, to the *Kel Adṛaṛ*. Among the *Kel Dennek* there is a related system apparently comprising a few additional poles. The terms mentioned for these poles by Nicolas differ in his studies from 1938 and 1950. According to his last study the poles placed at the narrow end of the tent are termed *šidel* (or *chidel*), while all poles placed in front and at the back of

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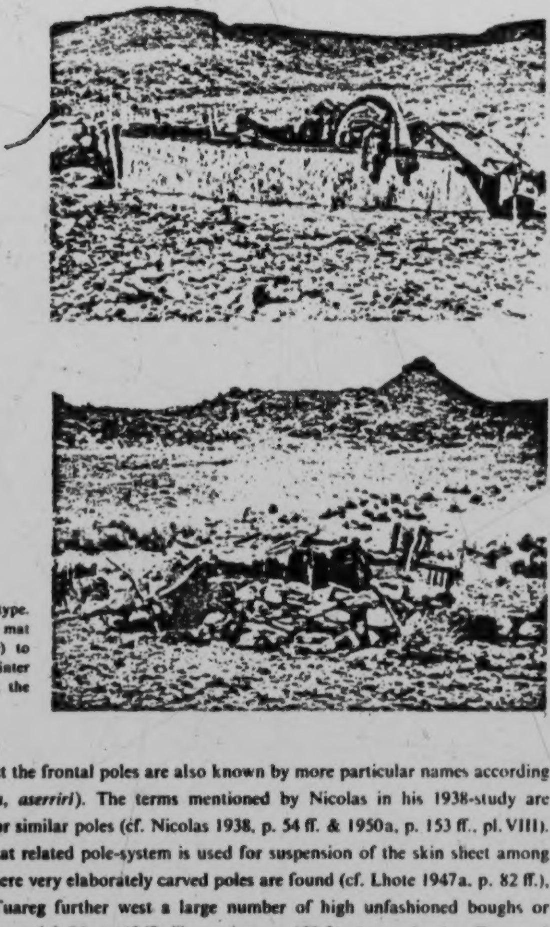

Fig. 269a–b. Skin tent of the B.2.f.3 type. The tent is surrounded by an *afeẓu* mat (*éseber*) and a stone wall (*amatey*) to protect the inmates against the cold winter winds. Ahaggar (the *Atakor* zone), the *Ağuh-en-tehlé* tribe.

*342 the tent are called *igemawen*; but the frontal poles are also known by more particular names according to their position (*madaγ*, *igam*, *aserriri*). The terms mentioned by Nicolas in his 1938-study are largely those used in Ahaggar for similar poles (cf. Nicolas 1938, p. 54 ff. & 1950a, p. 153 ff., pl. VIII). It would appear that a somewhat related pole-system is used for suspension of the skin sheet among the *Iwllemmeden Kel Ataram* where very elaborately carved poles are found (cf. Lhote 1947a, p. 82 ff.), while among the *Tengerregif* Tuareg further west a large number of high unfashioned boughs or sticks are used to suspend the tent (cf. Lhote 1947, illustrations p. 128 f.). As to the Ayr Tuareg, I have never seen properly suspended skin sheets among them, and the *Kel Ferwan* Tuareg did not know any names for such pole systems. It would seem as if most Tuareg who live in skin tents use an almost identical system of poles to which they fasten the sheet. The sheet is never fastened to the

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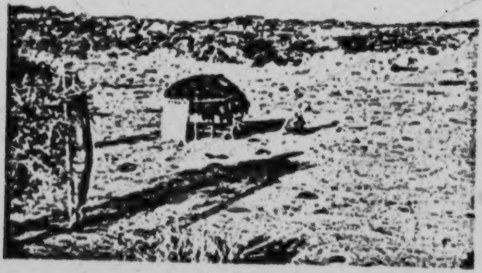

Fig. 270. An arched barrel-vaulted tent covered with a sheet of skin. In the background two arched mat tents. In the foreground to the left two cotton bows. Ayr, the *Kel Tédalé* tribe.

*342 true structure, and structurally there is a great diversity of tent types. It seems as if these tent structures can be divided into a few main groups which I shall describe in detail.

B.2.a. *Skin tents of arch construction.*

Tents which have one or more arches, generally placed at right angles to the longitudinal direction are widely found in Tuareg country. They are in fact more common than appears from the literature which has been so far published on Tuareg culture. The wide distribution of this particular structur in skin tents is interesting, the more so as it is related to the structure of mat tents. There are th following types of arch structures:—

B.2.a.1. This tent was seen in a camp of the *Kel Tédalé* Tuareg of North-western Ayr. It is known that skin tents are found among them (cf. Joubert 1939, p. 252 f.), but they have never been described. The Ayr Tuareg say that in the past many Tuareg of the *Kel Tédalé* lived in skin tents which, however, [114] are less common among them nowadays. This agrees with my own experience. I have visited several *Kel Tédalé* camps, but I have only seen the skin tent here mentioned. This was found in a camp of [361] three tents, the two others being ordinary mat tents. The skin tent I saw in this camp was also of the normal structure used for mat tents in Ayr, though shorter. The lower part was partly covered, not by a mat plaited from dum palm leaves, but by an *afezu* mat.

[221] B.2.a.2. Under this heading I describe two identical tents seen in a camp of *Iregenaten* Tuareg who belong to the Ahaggar federation but have their traditional grazing grounds west of the Ayr [361] Massif in the Tamesna Plains. The camp was actually situated in the region between Tegidda-n-tésemt [137] and I-n-abanγerit, where perennial vegetation is extremely scarce and mainly comprises scattered *tamat* acacias (*Acacia flava*). The camp visited had eight skin tents among which were the two of arch construction as follows:—

[824] Both tents were very small, and their wooden structure was made of boughs of the *tamat* acacia (*Acacia flava*). In the middle of the tent and at right angles to its longitudinal direction there was an

arch about 1.50 m high. It consisted of two boughs fixed in the ground and lashed together at their 342* tops; this was termed *ağeğu* (pl. *iğeğan*). At both sides of this arch there was a horizontal cross-bar known as *areğarağa* (pl. *ireğerağaten*) which rested upon two forked sticks (*téğeǥǥewt*, pl. *tiğeǥǥewin*). The arch and the two pairs of horizontal cross-bars were parallel to one another, connected by means of two semi-arches termed *ilellewan* (sing. *alellewa*) each of them made from two slender rods attached to each other over the arch. These semi-arches were fastened to the middle arch and to the outer edges of the two cross-bars by means of cords. Around this structure, which supported the sheet, there was a number of wooden poles or posts some of which were higher than the tent. These poles and posts were used for the attachment of the sheet, which, however, during my visit rested over the structure without any attachment. A narrow mat of the ordinary *afeẓu*-type belonged to this tent (Fig. 271).

Tents structurally akin to the B.2.a.2. type but without semi-arches in the longitudinal direction of the dwelling are found south and north of the Tamesna region:—

B.2.a.3. This tent was seen in a camp inhabited by blacksmiths of the *Kel Dennek* country around 361 Tawa. They had temporarily settled not far from Agadez to work among pastoral *Kel Ayr*. The camp 162 comprised only three tents which were very small – about 4.00 × 2.00 m with a height of about 1.20 m. The tents were structurally identical and had sheets sewn together from many small pieces of skin resting upon the following structure:— A central arch at right angles to the longitudinal direction. It was called *tekḳekḳewat* (pl. *tekḳekḳewatin*) like the central arch of the ordinary mat tent among the Ayr Tuareg. At both sides of this arch and parallel to it there was a somewhat lower horizontal cross-bar resting upon two forked sticks (*tigettewin*, sing. *tégettewt*). The sheet rested upon this structure and was fastened to a few upright poles fixed in the ground around it. There were three such sticks at the front and at the back, and one at each of the narrow ends. A mat about one metre high belonged to the tent; this mat was not a normal *afezu* mat, but plaited – apparently of dum palm material (cf. Fig. 272). A wooden bed (*tédabut*) was placed in the middle of the tent, occupying most 352 of its ground area.

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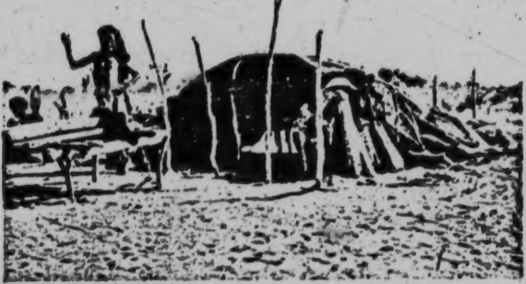

Fig. 271. Skin tent of the B.2.a.2. type. Ahaggar Tuareg of Tamesna, the *Ireğenaten* tribe.

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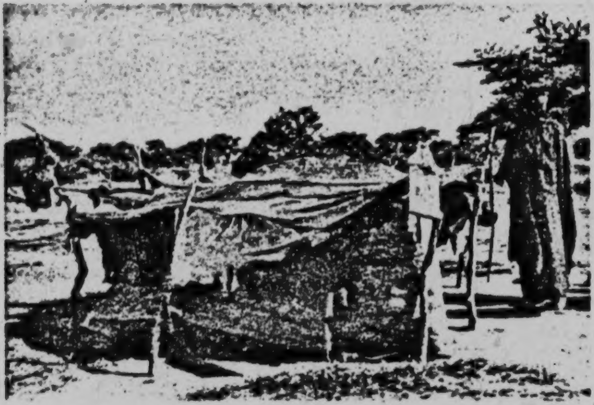

Fig. 272. Skin tent of the B.2.a.3. type belonging to *Kel Dennek* blacksmiths camping in Ayr near Agadez.

*342 of its ground area. The blacksmiths said that in their homeland at Twa only very small tents had central arches, while large tents had central T-shaped posts, but this latter structure could not be used in small tents because of the very large wooden bed. Tents of this type have not been described by Nicolas from the *Kel Dennek*, and various people who know this area have told me that they have never seen there tents of arch construction.

B.2.a.4. The tent type to be described is of arch construction. It was formerly very common in Ahaggar, but is extremely rare nowadays. The sheet of skin rests upon two arches placed parallel to each other at right angles to the longitudinal direction, and upon two horizontal cross-bars each [824] [335] lying on a pair of forked sticks. These wooden elements are normally made of the *tabarekkat* tree (*Tamarix aphylla*), the arches being manufactured from its roots which are heated over the fire and attached with cords in their bent position, as has already been described from the Ayr Tuareg, who make arches of acacia roots for mat tents in this way (cf. p. 351). But the arches used in Ahaggar are made from one piece of root each, and not from two pieces lashed together as in Ayr. The arches thus made are known as *iğeğan* (sing. *ağeğu*), but the term *tiheknin* (sing. *téhakent*) is generally used by vassals of the tribes *Ağuh-en-tehlé* and *Dag Ṛali*. Though the arches are made from a single piece of root they may be fairly large, and two arches which are now in the Musée de l'homme in Paris have, according to Lhote, a diameter of 1.70 metres (cf. Lhote 1947a, p. 43; Musée de l'homme, Coll. H. Lhote 1941). The cross-bars horizontally placed at both sides of the arches are called *ireğerağaten* (sing. *areğarağa*), and the forked sticks which support them *tiğeţţewin* (*téğeţţewt*). Foucauld states that the two horizontal cross-bars resting upon forked poles do not properly belong to the tent structure, so that the sheet is supported only by the two arches which are placed parallel to each other at a distance of about 1.50 metres (Foucauld 1951–52, I, p. 247 f.). These two arches are also mentioned by Benhazera without any reference to horizontal cross-bars (Benhazera 1908, p. 26). However, my investigations seem to prove that the cross-bars with their upright forked poles form part of the structure, but the sheet may not always be supported by the cross-bars, as the suspension of the sheet in hot weather may be so elevated that the sheet rests only upon the arches which are somewhat higher than the cross-bars. Traditionally, the sheet is attached to the system of twelve poles mentioned above (cf. p. 364). 342*

B.2.a.5. This tent, used in Ahaggar, is made up of the same structural elements as the above mentioned type, but the two arches are placed parallel to the longitudinal direction and at right angles to the two outer cross-bars. The Tuareg claim that this type is not a traditional structure. The arches, they say, should traditionally be placed at a right angle to the longitudinal direction and not parallel to it. I have only seen one tent of this type, namely in the *Amenukal's* camp close to Abalessa. The two arches in this case were not made of tamarix roots but of slender palm-fronds lashed together with cords. The arches were about 1.10 m high and 0.90 m in width (cf. Fig. 273).

The following two tents used by the Ahaggar Tuareg are hybrid types which seem to be used mainly in the *Aguh-en-tehlé* tribe where I have seen a few:

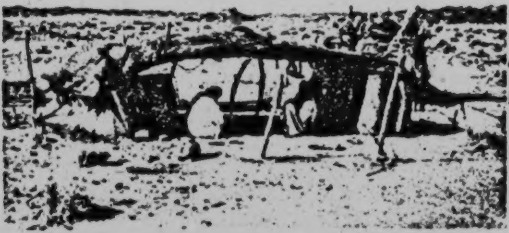

Fig. 273. Skin tent of the B.2.a.5. type. Ahaggar, the *Kel Ṛela* tribe.

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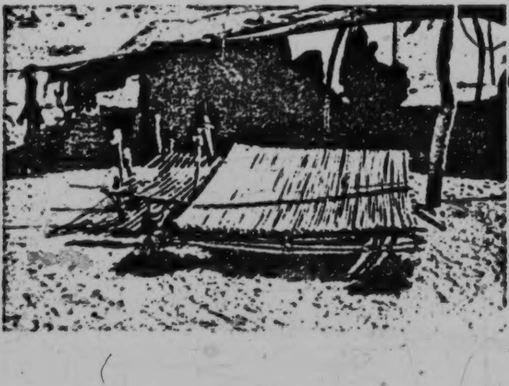

Fig. 274. A close-up of the above tent (Fig. 273). In the foreground are beds for a married couple and a child. Such beds made of palm leaves' ribs are rare among pastoral Tuareg. Ahaggar, the *Kel Ṛela* tribe.

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[824]

*342 B.2.a.6. The tent has one arch made of tamarix root, and this arch is placed parallel to the longitudinal direction at the back of the tent. A horizontal cross-bar (*aregaraga*) rests with one end upon the top of the arch, while its other end is supported by a vertical forked pole at the front of the tent. At both sides of this cross-bar there is a cross-bar (*aregaraga*) resting upon two forked sticks (*tigeftewin*). This type is excellently depicted by Lhote (cf. Lhote 1947a, photos 24–26 p. 49 & 64; 1955, Fig. 23 p. 256).

B.2.a.7. The tent is identical with B.2.a.6 with the exception that there are two central horizontal cross-bars resting upon the top of the hind arch and upon two upright forked poles placed very close to each other in the front.

[311] B.2.a.8. This is a tent described and depicted by Barth from a Tuareg camp south of the Niger between the Hombori Mountains and the city of Bambara:— The sheet is suspended over three pairs of sticks of which the middle pair is much higher than the outer pairs. The middle pair of sticks is not of the same type in all tents, for the two high sticks in some tents are bent against each other and kept together by means of a very short piece of wood ("Querholz"). Judging from Barth's illustration of this tent it would seem as if the two middle sticks, united by a small piece of wood at their bent tops, form a high central arch. The skin tent, which contains two beds made from date palm-fronds, is apparently a very large one. It is provided with a mat of the type generally used for skin tents (Barth 1857–58, IV, p. 345 f.).

We conclude this description of arched skin tents by saying that these dwellings seem to be found within most Tuareg groups. Such tents are not so common nowadays as they were earlier. This is true of Ahaggar, where most Tuareg had arched skin tents until quite recently. Thus several informants about 50 or 60 years old told me that in their childhood most Ahaggar Tuareg lived in skin tents of this type.

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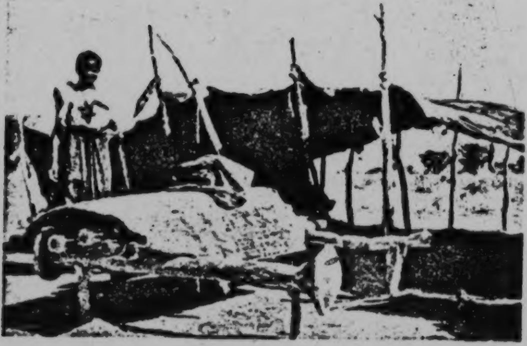

Fig. 275. Skin tent of the B.2.b.1 type. In the foreground a bed (*tedabut*) resting upon four forked sticks. Ahaggar Tuareg of Tamesna, the *Iregenaten* tribe.

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B.2.b. *Skin tents with semi-arches over horizontal cross-bars*

I have seen such tents among Ahaggar Tuareg of Tamesna, and it is from this area that I describe the following structure:—

B.2.b.1. Three tents of this type were seen in the *Ireǧenaten* camp which comprised eight tents south [361] of *I-n-abanʃerit*. One of the tents was very large with a sheet measuring about 7.00×7.00 m, while the two others were comparatively small. The two small tents had a maximum height of about 1.50 m, while the large tent was about 1.70 m high. Structurally the three tents were identical, as follows:— Three pairs of forked sticks with horizontal cross-bars were placed parallel to one another at right angles to the longitudinal direction. The middle pair of sticks was a good deal higher than the two outer pairs; the two central poles or sticks were called *igetten* (sing. *aget*) and the sticks of the two outer pairs *tigeʃʃewin* (sing. *tégeʃʃewt*). The three horizontal cross-bars were all known as *ireǧeraǧaten* (sing. *areǧaraǧa*). The skeleton of these three cross-bars resting upon pairs of sticks had in addition two semi-arches known as *ilellewan* (sing. *alellewa*). Each of these semi-arches consisted of two slender rods, tied together at their thin ends resting upon the central cross-bars to which they were also fastened with cords, while the thick ends of the semi-arches were tied to the two outer cross-bars close to their edges. This structure, we see, is not very different from the B.2.a.2 type. The sole distinction between these two types is that the latter has a central arch instead of a central cross-bar resting upon upright poles. Actually, the types B.2.b.1 and B.2.a.2 were seen in the same camp and constituted five out of the total eight tents found in it. The wooden structure of the B.2.b.1. tents was also made from boughs of the *tamat* acacia (*Acacia flava*). The sheet was attached to a number of poles, both in the front and at the back, while the narrow ends were kept close to the grounds by means of short wooden pegs. The ordinary *afeẓu* mats belonged to all three tents (Fig. 275).

B.2.b.2. This is a very small tent depicted by Lhote from the *Iwllemmeden* Tuareg around Gao. [131] Its structure appears to be related to that just described (cf. Lhote 1947a, photo 79 p. 113).

B.2.b.3. This is a most interesting type of skin tent which is described by Lhote from the south- [101] western Tuareg – the *Tengerregiʃ* and the *Kel Inteser*. The type is illustrated by excellent photographs which clearly indicate the structure, namely:— There are two long semi-arches each of which is made from two curved sticks lashed together. The semi-arches are attached at their thick ends to two horizontal cross-bars, each of which rests upon a pair of forked sticks. The horizontal cross-bars are very short so that the distance between the two parallel semi-arches which follow the longitudinal direction of the structure is also very short. The semi-arches are further supported by two other short cross-bars each resting upon two sticks. These sticks with their cross-bars are not always erected in the same way. In summer, the sticks are upright, while in winter they are placed obliquely towards the inside. All poles and sticks which make up the structure are buried solidly in the ground, and this is also the case with the very large number of poles placed along the sides for fastening the sheet. According to Lhote, some of these poles are termed *igem* and *ounousen* (*unnusen*), which words are also used in Ahaggar for certain poles. Though the structure is a very narrow one, these tents may nevertheless be very large as the sheet is fastened to many poles placed at some distance from the narrow structure Lhote 1947a, p. 100, 160 f., photographs nos. 85-93 p. 128-129).

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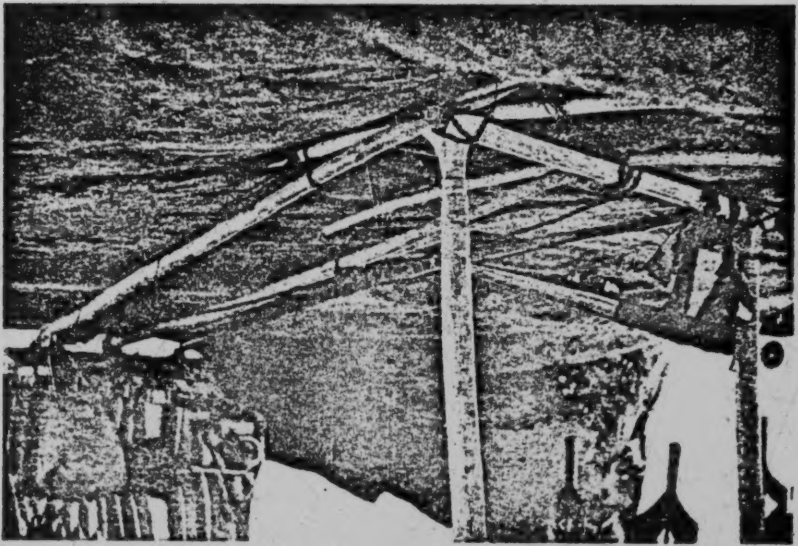

Fig. 276. The B.2.b.4 tent described in the text below. The central pair of vertical forked sticks with their cross-bar is seen to the right. Attached to the central cross-bar is a sword (*takuba*). At the bottom of the photograph to the right the upper parts of three elaborately carved wooden posts (*ihelan*, sing. *èhela*). The tent structure is similar to that depicted Fig. 277. From the *Kel Tahabanat* tribe, *Kel Ataram*, near Ayoru on the Niger.

*342 B.2.b.4. This is a type of tent which I saw among the *Western Iwllemmeden* west of Ayoru on the Niger. I had the opportunity to study its structure in the camp of the noble chief *Amdeṛ* of the *Kel Tahabanat* tribe, and I saw similar tents among *Bélla* and slaves of the same region. The tent was said to be in use among all pastoralists including the vassal tribes, and I saw no other type of portable dwellings. The structure of this tent is the following:—

(1) Three pairs of vertical forked sticks (sing. *tagettiwt*) are placed parallel to one another and at right angles to the longitudinal direction. The two outer pairs of sticks are somewhat lower than the middle pair.

(2) Three horizontal cross-bars (sing. *aragaragay*) rest in the prongs of the three pairs of vertical sticks at right angles to the longitudinal direction.

(3) Three semi-arches (sing. *ézeger*), each of them being made of two slender rods, are placed over the horizontal cross-bars at right angles.

(4) A long cord (*taṛant*) running along the upper structure fastenes the horizontal cross-bars to the prongs of the vertical sticks and the semi-arches to the cross-bars.

(5) A number of poles placed in the ground outside the structure serve the attachment of the skin sheet, or a sheet of green canvas which is sometimes used as a substitute for skin.

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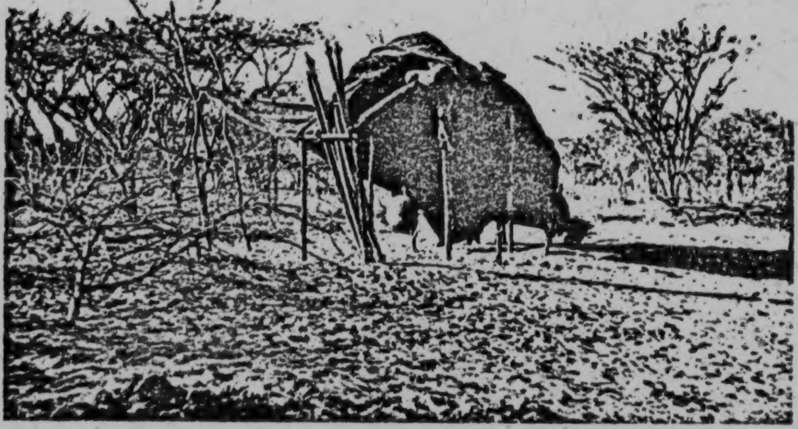

Fig. 277. The B.2.b.4 tent with three pairs of vertical forked sticks carrying three horizontal cross-bars in their prongs. Three semi-arches each of them being made of two slender rods are placed over the cross-bars at right angles. The carved poles leaning against one of the cross-bars constitute the main elements of a narrow wooden bed (*tédabut*). From a *Bélla* camp near Ayoru on the Niger.

I saw a few tents which had two or four longitudinal semi-arches, but three semi-arches were normal. The structure of the tent inhabited by the chief *Amdeṛ* had the following dimensions:— 342*

The central pair of vertical forked sticks with their cross-bar was about 1.30 m high, and the two outer pairs 0.20 m lower. The distance between the two sticks of the central pair was about 1.00 m, between the sticks of the two outer pairs about 0.70 m. The distance from the central pair of sticks to each of the two outer pairs was 1.50 to 2.00 m.

B.2.c. *Skin tents supported by cross-bars connected with horizontal sticks.*

B.2.c.1. It is uncertain whether the structure to be described forms a regular type, as I know it only from a photograph which is in the photographic collection of the Musée de l'homme in Paris (Collection Photographique, 42.811.301). However, this photograph, which is taken north-east of Kidal in Adṛaṛ of the Ifoṛas, has also been reproduced by Gjessing in his work on general ethnography (Gjessing 1953, II, p. 176–177). The photograph shows three Tuareg women erecting a tent structure as follows:— Two comparatively high forked poles carry a relatively short horizontal cross-bar which, judging from the photograph, measures less than a metre. A pair of exactly similar poles with

*342 a similar cross-bar is placed at some distance from its first-mentioned counterpart, and these two pairs of poles, with their cross-bars, are connected with one another by means of horizontal sticks or rods lashed to the cross-bars and the vertical poles around their prongs. It is not known whether this system constitutes the whole structure, and it is also unknown whether the long horizontal sticks or rods follow the longitudinal direction or are placed at right angles to it.

B.2.d. *Skin tents supported by two pairs of forked sticks with cross-bars and a system of cords in the longitudinal direction*

This type is described by Urvoy from "French West Africa", and is perhaps common among certain south-western Tuareg though this is not explicitly stated by the author. The structure is claimed to be in ordinary use, and is briefly as follows:— The two pairs of two forked sticks with their cross-bars are placed parallel to each other. [284] Two cords, made from goat's hair or leather, cross this structure in a longitudinal direction running over the forked sticks and the ends of their cross-bars, and are attached to small wooden pegs driven into the ground at the narrow ends. The idea of this cord system is not quite clear. The sheet is attached to poles outside the structure. The cords running over the wooden skeleton may serve as a support for the sheet, but it may also serve to create a more solid position for the wooden structure (cf. Urvoy 1942, p. 33 ff.).

B.2.e. *Skin tents with longitudinal cross-bars connected with horizontal sticks*

A tent apparently of this structure is depicted by Lhote. The whole edifice is not seen on his photograph, but it is suggested that it is as follows:— Two rows of three forked sticks parallel to each other. Each row has a horizontal cross-bar resting in the prongs, and these two parallel cross-bars are connected with each other by means of three or four horizontal sticks at right angles to the longer cross-bars. The photograph of this tent, which seems to be a very small one, is taken among *Iwllemmeden* Tuareg in the region of Gao (cf. Lhote 1947a, photograph No. 80 p. 113).

B.2.f. *Skin tents with pairs of forked poles carrying horizontal cross-bars*

Such tents are widely found in Tuareg country. They are recorded from the *Iwllemmeden Kel Ataram*, the *Ifoṛas* Tuareg of Adṛaṛ-n-Foṛas, and from the Ahaggar Tuareg. The sub-types described below are closely related to each other.

B.2.f.1. This type is described in detail by Lhote from *Iwellemmeden Kel Ataram*. It consists of three pairs of forked poles or sticks which carry horizontal cross-bars at right angles to the longitudinal direction. The forked uprights are known as *tigettewin* (sing. *tagettiwt*), and the cross-bars are called *chiburgin*. The distance between the middle pair and the two outer pairs of uprights with their cross-bars is about 1.50 metres, and the middle pair is generally somewhat higher than the two outer pairs. Nine uprights depicted by Lhote vary in height from 1.20 to 1.44 metres and have a diameter of about 0.03 m. The three pairs of uprights and cross-bars are connected with a leather cord. This ties the cross-bars to their forked uprights and connects the latter poles with each other in the longitudinal direction. The leather cords adds to the solidity and flexibility of the structure. The sheet which rests upon this structure is attached to poles fixed in the ground at the sides (cf. Lhote 1947a, p. 84 ff., 342* 123 ff., 154 f., photographs Nos. 59–65, p. 96–97).

B.2.f.2. This type, described from the *Iwllemmeden Kel Ataram* by Lhote, is similar to the above-mentioned type but has four pairs of forked sticks provided with cross-bars. The two middle pairs of uprights are somewhat higher than the two outer pairs. This structure is used for particularly large tents among the Western *Iwllemmeden* (cf. Lhote 1947a, p. 85).

Lhote says that the above-mentioned two types of structure are also found among the Kel Adṛaṛ (Lhote 1947a, p. 108 f.) and this would also seem quite natural in view of the fact that these Tuareg once formed part of the *Iwllemmeden* group. Cortier says that the *Kel Adṛaṛ* have tent structures of uprights with horizontal cross-bars (Cortier 1908, p. 327 f.). I have myself been told by Ifoṛas Tuareg whom I met in Ahaggar that they possess tent structures similar to those commonly used in Ahaggar nowadays, and these Ahaggar tents resemble those described from the *Iwllemmeden* by Lhote. I shall now describe these structural types of Ahaggar.

B.2.f.3. This tent, which has three pairs of uprights carrying horizontal cross-bars, has been frequently described and depicted in literature. A most valuable description, with many photographs showing the wooden structure, has been published by Lhote in his book on Tuareg tents (Lhote 1947a, p. 34 ff., photographs Nos. 1, 5, 7, 8, 13, 20, 27, 36, 37). The structure is also described by the same author in his general work on the Ahaggar Tuareg (Lhote 1955a, Fig. 22 p. 254). I present my own [22] observations from Ahaggar, where I have lived in such tents over extremely long periods. A tent which I measured among the noble *Kel Ṛela* may be taken as an example of the normal structure of this type. It was made from boughs of the *tabarekkat* tamarisk (*Tamarix aphylla*) which is generally [24] used for wooden tent structures in the north. The boughs had a diameter of about 0.05–0.07 m, the upright poles being somewhat thicker than the horizontal cross-bars. The three pairs of uprights had small prongs to which the cross-bars were firmly attached by cords of goat hair. The cross-bars were slightly curved, as is normal for this structure. All three cross-bars are called *ireġeraġaten* (sing. *areġaraġa*). The two pairs of outer poles are termed *tiġeṭṭewin* (sing. *téġeṭṭewt*), while the middle pair of uprights are called *iġetten* (sing. *aġet*). Lhote gives the name *tamankayt* to the middle pair of sticks [114] (cf. Lhote 1955a, Fig. 22 p. 254), but this is not correct as the term *tamankayt* is used properly for a central T-shaped post to be described in the next section. The sheet rests upon the structure of uprights with their cross-bars, and pieces of old cotton are normally wrapped around the place where the cross-bars rest in the prongs in order that the sheet may not be galled by the prongs. It should be noted that the cross-bars are lashed separately to their uprights, and not by longitudinal cords as among the *Iwllemmeden Kel Ataram*. A piece of cord is tied around the end of a cross-bar and around one of the prongs of its uprights, and is then drawn along the cross-bar to be tied around its other end resting in the prong. All upright poles are fixed in holes dug 0.30–0.50 m deep in the ground, like the holes for the outer poles to which the sheet is fastened with cords of goat hair.

B.2.f.4. This tent differs from that just described in that it has two equally high pairs of uprights in the middle of the tent. These middle uprights (*iġetten*) are higher than the two pairs of outer uprights (*tiġeṭṭewin*). There are in other words four parallel pairs of uprights carrying cross-bars which are frequently slightly curved as in the above-mentioned structure. This structure, with an additional pair

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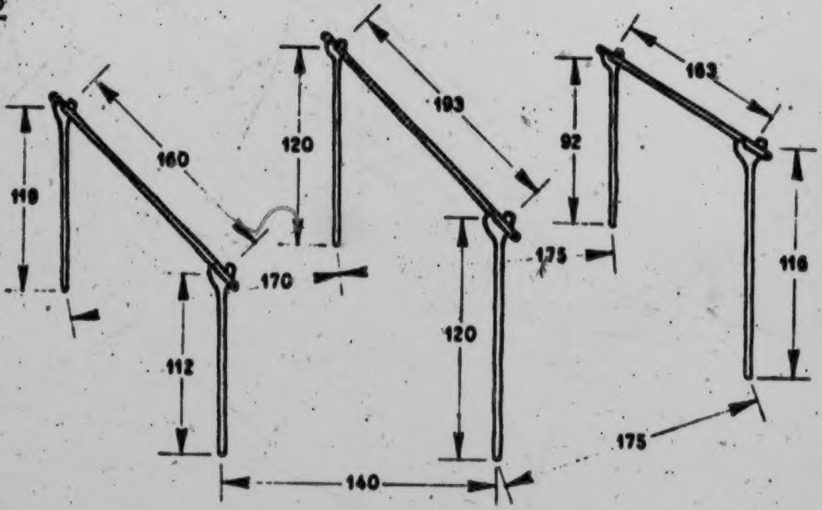

Fig. 278. The wooden structure of a skin tent of B.2.f.3 type. Measurements are in centimetres. Ahaggar, the *Kel Rela* tribe.

of uprights plus a cross-bar, may perhaps be explained as a support of very large tents, but I do not believe that this is the whole explanation, for I have frequently seen a structure having two middle pairs of uprights with cross-bars in very small tents, and it is remarkable that in tents of this type, whether large or small, the two middle pairs of uprights are frequently placed very close to each other.

B.2.f.5. This type occurs in Ahaggar. It is much like the above-mentioned two types, but has six [184] pairs of parallel forked uprights with cross-bars. So many pairs of uprights with cross-bars are found only in large tents, and I have not seen such tents in tribes other than the *Dag Rali*. The two middle pairs of uprights are equally high and higher than the two next pairs which again are higher than the two outer pairs. The *Dag Rali* Tuareg say that tents with them may have yet another pair of uprights in addition to the six pairs, but this I have never seen.

B.2.g. *Skin tents with a central T-shaped post*

Under this heading I mention skin tents with a central post which carries a short horizontal cross-bar causing it to resemble a *T*. It is characteristic of this post that it is never buried in the ground, but rests upon the surface; the post is kept in upright position mainly by the weight of the suspended sheet, though in certain tents the T-shaped post is also supported by cords attached to sticks and to the short cross-bar of the post. Skin tents provided with a central T-shaped post are found in many

*342 Tuareg groups, perhaps in all. They occur in the two groups of Northern Tuareg, but are rare in and around the Ahaggar Massif, though apparently more common among the Ahaggar Tuareg who live in Tamesna. They are also known among the *Kel Adγaγ* (cf. Cortier 1908, p. 327 f.), and they constitute the common tent among the *Kel Dennek*. On the other hand these tents seem to be rare in and south of the Ayr Massif, where most people have mat tents, and though certain illustrations in literature seem to point to the existence of central T-shaped posts in the tents of the *Iwllemmeden Kel Ataram* nothing seems to have been written about the existence of T-shaped posts there. However, in the ethnographical museum of Neuchâtel there is a short cross-bar of a T-shaped post brought from Tuareg living at Gao (cf. p. 382), and I was told by the chief *Amdeγ* of the noble *Kel Tahabo*[illegible]be that T-shaped posts once existed among them but were not used nowadays.

It is most likely that all T-shaped structures are historically related, and the question is taken up later in this chapter. The sub-types to be described are the following:—

B.2.g.1. This type has no other elements to support the sheet but the T-shaped post. Such tents have been depicted by Olufsen and Moberg from Ahaggar (Olufsen 1924a, p. 132 f.; Moberg 1927, p. 212, 229, 257) from which region it is also mentioned by Benhazera (cf. Benhazera 1908, p. 25) and by Foucauld (cf. Foucauld 1951–52, I, p. 247 ff.). I have never seen a skin tent thus erected in or around the Ahaggar Massif, and I have only seen a tent of this kind once in a camp of Ahaggar Tuareg close to Ingal in the extreme south. Foucauld mentions this type of tent as a traditional one to the Ahaggar Tuareg, stating that the central post is always very high. It may attain a height of 2.50 metres and it is always possible for adult men to stand upright in the middle of the tent. It is evident that a tent erected in this way must be firmly attached to poles around it, and the twelve poles traditionally belonging to a skin tent in Ahaggar must necessarily be used in tents which are only supported by a T-shaped post under the sheet (cf. Foucauld 1951–52, I, p. 247 ff.). A tent erected in this way has very much the shape of an umbrella or parasol, and it has the same functions. When it rains the water

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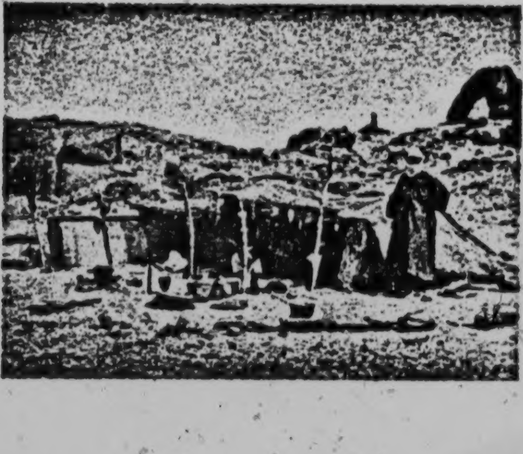

Fig. 279. Skin tent of the B.2.f.3 type. Ahaggar, the *Dag Rali* tribe.

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will quickly run down the sheet, and it is preferable in very hot weather not to sit just under the leather sheet which becomes extremely hot. A straw mat of *afeẓu* grass (*Panicum turgidum*) belongs traditionally to this type of tent as well as to other tents of T-shaped structure to be mentioned below.

B.2.g.2. This type is the most common one among the Northern Tuareg. It has two pairs of uprights (*tigeʃʃewin*) with horizontal cross-bars (*iregerağaten*), between which is placed the T-shaped post with its short cross-bar at right angles to the longitudinal direction of the tent. The sheet in this case may be suspended very high up at the surrounding poles, in which case it may be supported solely by the T-shaped post. But the forked poles (*tigeʃʃewin*) with their cross-bars normally serve as a support for the sheet which may be attached to small wooden pegs at the narrow ends (cf. Figs. 280-281). That the forked poles carrying cross-bars at both sides of the central post belong to the tent structure seems to be indicated by the Tuareg when they speak of *tigeʃʃewin n ehakit*, that is "the forked poles of the tent sheet".

B.2.g.3. A tent of the B.2.g.2. type with the exception that the short cross-bar of the central post follows the longitudinal direction and consequently is placed at right angles to the two cross-bars resting in forked poles at the narrow ends. I have once seen a tent like this in Ṭasilé-n-Ajjer, but it was made from boughs cut from a tamarisk just before the tent was erected. These boughs were unfashioned, and the tent was on the whole put up in a rather haphazard fashion. The short cross-bar of the central T-shaped pole among the Northern Tuareg is traditionally placed at right angles to the longitudinal direction.

B.2.g.4. This type is a tent with a T-shaped post placed between two pairs of forked sticks with cross-bars as described above, but the very short cross-bar of the central post is attached to the outer cross-bars, resting on forked poles, by means of cords. The short cross-bar of the central pole is pierced with two or four holes for the attachment of these cords. I have not seen this type of structure, but have been told that it is occasionally used among the Ahaggar Tuareg.

B.2.g.5. An example of this tent is found in the Ethnographical Collection of the National Museum

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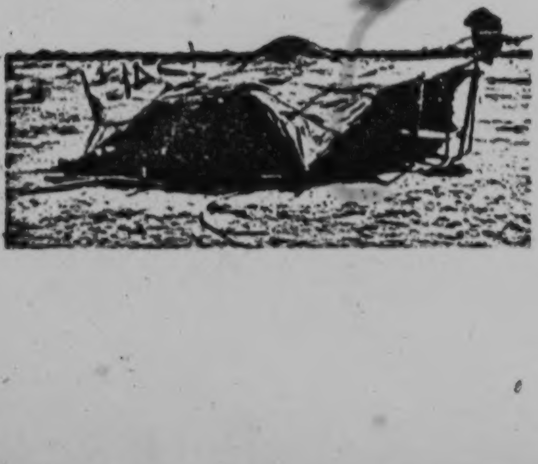

Fig. 280. A large skin tent supported by a central T-shaped post (the B.2.g.2 type). The curved form of the cross-bar resting upon the central post is clearly seen. The sheet of skin has five longitudinal skin rows (*[illegible]*). From a camp of Ahaggar Tuareg near Ingal.

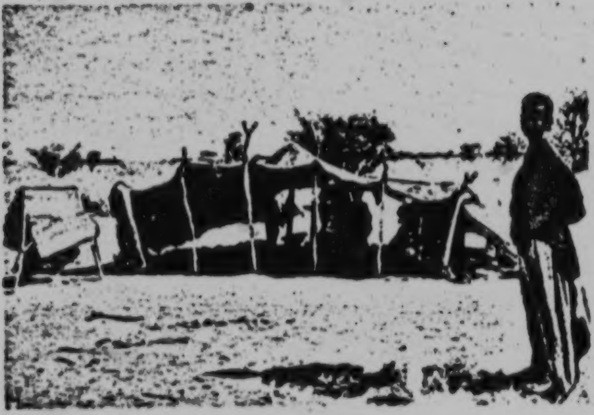

Fig. 281. A small skin tent supported by a central T-shaped post. Ahaggar Tuareg of Tamesna, the *Iregenaten* tribe.

in Copenhagen (Museum number G.1.1). It was brought back by Olufsen 1923 from a camp of the Ahaggar *Amenokal Akhamuk* close to Abalessa (cf. Olufsen 1923, p. 4 f.; 1924a, p. 131, 136). This tent is already referred to above (p. 361). Its structure is as follows:— It has a central post 1.87 metres high which carries the comparatively long cross-bar at a right angle to the longitudinal direction of the tent. At each end of the cross-bar, which is slightly curved, there are two holes for the attachment of cords which are also fastened to four short upright poles placed two by two at the narrow sides of the tent. The sheet rests over this structure so that it is also supported by the cords. For a more detailed description of this tent readers are referred to Feilberg's report (cf. Feilberg 1944, p. 139 f.). I have not seen tents of this kind among the Ahaggar Tuareg, but I have been told that they are used even nowadays. It is perhaps this type of tent which is depicted by Lhote from a camp of Ayr Tuareg south of the Massif (cf. Lhote 1947a, Fig. 4 p. 39, p. 77 f., photograph 50 p. 80–81, p. 118, 151).

B.2.g.6. This type constitutes the prominent type of tent structure among the *Kel Dennek*. It is largely identical with B.2.g.5, but the short cross-bar of the central post is placed parallel to the longitudinal direction of the tent. The cross-bar has four holes – two at each of its ends – to which are fastened cords which at their other ends are fastened to four upright sticks placed two by two under the sheet. The sheet may rest upon the cords and the poles to which they are fastened, but in day-time when the tent is open the sheet will normally rest solely upon the central post with its cross-bar. The tent is described in detail by Nicolas who states that the central post is comparatively high, from 1.50 to 2.00 metres (cf. Nicolas 1938, p. 54 ff.; 1950a, p. 153 ff., pl. VIII).

The IFAN Museum at Niamey has a tent similar to that described by Nicolas. It derives from the region of Tawa and has the following dimensions:—

The central T-shaped post is 2.00 m high and rests upon the surface. Its cross-bar (cf. no. 8, p. 382) follows the longitudinal direction of the tent and has two triangular holes at each end for cord attach-

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*342 ment to the two pairs of outer sticks which are about 1.20 m high. The distance between the sticks, which form a pair, is 0.60–0.70 m. The sheet of skin measures 5.00 by 6.00 m and consists of eight *tarda*. It is placed over the structure and fastened to 28 poles. The tent is surrounded by a 1.00 m high *afezu* mat leaning against vertical sticks fixed in the ground under the sheet.

These are the ordinary types of skin tents provided with central T-shaped posts. In literature there seems to be some confusion as to the proper terms to be used for a T-shaped post of the type described. Most authors use the word *tamankayt* for the post, the words *asellum* (Ahaggar) or *asulan* (*Iwllemmeden*, Ayr) for the short cross-bar which rests upon its top. (cf. Lhote 1947a, p. 38; 1955, p. 254 ff.; Balout 1959, pl. XXX; Nicolas 1950a, p. 154, pl. VIII). The word *asellum* (or *asulan*) may be correctly used to designate the short cross-bar resting upon the central post; its proper meaning according to Foucauld is "a board regardless of its dimensions" (Foucauld 1951–52, IV, p. 1831), but the word *tamankayt* does not refer to the central post. Foucauld uses this word not for the post, but for the post together with its cross-bar (Foucauld 1951–52, I, 247 f., III, p. 1213). The Tuareg of Ahaggar have invariably explained to me that speaking correctly the word *tamankayt* refers to the short horizontal cross-bar alone, while the post is known as *aget* like all other upright posts. It might perhaps be tempting to connect the word *tamankayt* with the verb *enki* which according to Foucauld has the meaning "to perform the movements of the sexual act" (cf. Foucauld 1951–52, III, p. 1373). For it is characteristic of the *tamankayt* system that the central post is placed in a hollow carved at the middle of its cross-bar (cf. Fig. 282).

The cross-bars of *tamankayt* type vary in size and form. Several pieces are found in museums or are described in literature. The following types can be mentioned:—

From Ahaggar:—

(1) A flat and slightly curved piece of wood which has a thickening at the middle into which a hollow [531] to support the central post is carved. On both sides of the hollow there is geometrical ornamentation. The flat cross-bar has no holes for the attachment of cords (Musée de l'homme, no. 34.196.1; cf. Lhote 1947a, Fig. 4 (1) p. 39, 117, photograph 15 p. 33).

(2) A slightly curved cross-bar of oval shape provided with a square hollow to support the central post (Musée d'Ethnographie, Neuchâtel, no. 48.2.173).

(3) A flat and slightly curved cross-bar with a thickening at the middle in which is curved a round hollow to support the central post. The piece is 0.51 m long, about 0.17 m broad, and only about [531] 0.01 m thick at both sides of the hollow. The inner side has geometrical ornamentation, and there is one little round hole for cord-attachment at each end (Musée d'Ethnographie et de Préhistoire du Bardo, Alger, No. D.2.; cf. Balout 1959, pl. XXX).

(4) A flat and comparatively long cross-bar about 0.87 m long and 0.08 m broad with a square hollow to support the central post, and four round holes (one close to the four corners of the rectangular piece of wood) for cord-attachment. This cross-bar is conserved in the Ethnographical Col-

[text continues on p.382]

Fig. 282. The central T-shaped post of the skin tent belonging to Olufsen's collection in the National Museum. Dimension of the cross-bar: 0.87×0.08 m. The tent is of B.2.g.5 type. (N.M. G. I-1).

[cf. p. 381]

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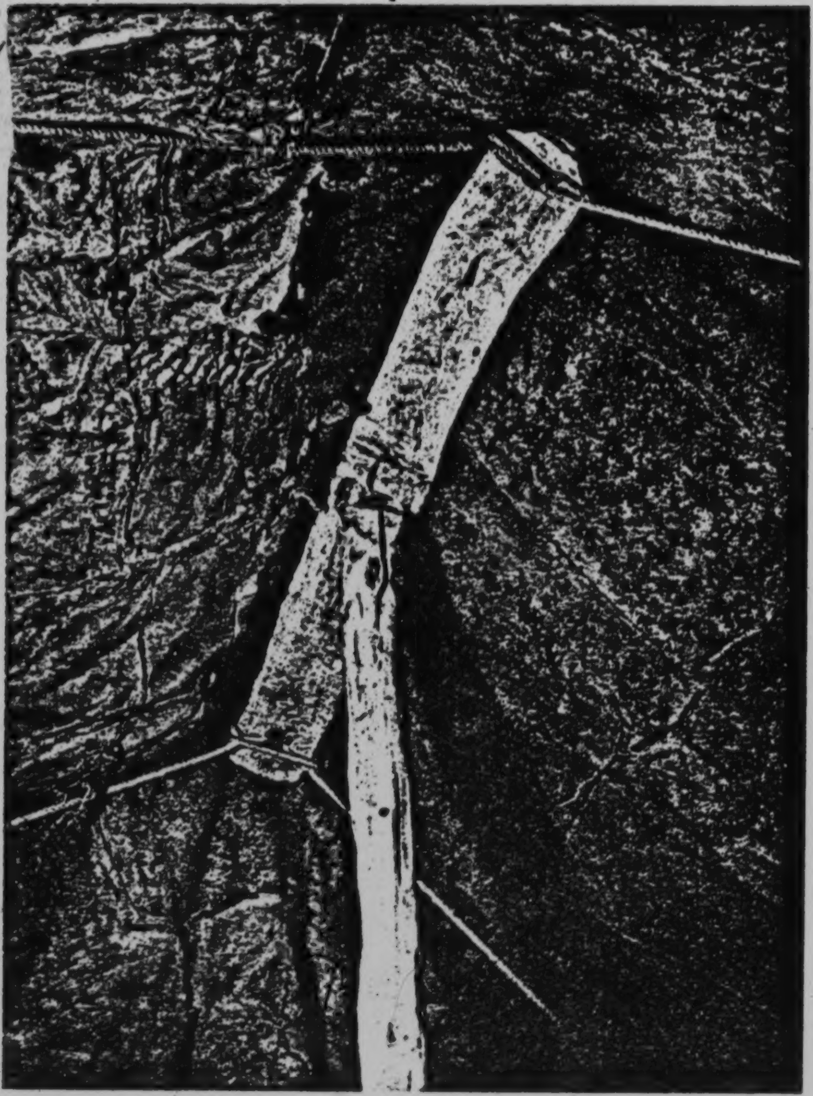

*342 lection of the National Museum in Copenhagen. It belongs to the tent referred to under B.2.g.5 (p. 378 f.) (National Museum, G.I.1; cf. Feilberg 1944, p. 140) (cf. Fig. 282).

From Ayr:—

(5) A rather curved and heavy cross-bar 0.51 m long, and 0.12 m broad. At its middle there is a funnel-shaped thickening with a round hollow to support the central post. There are four rectangular holes at the corners for cord-attachment. This cross-bar comes from the *Kel Takriza* tribe which belongs to the *Ineslemen* class (Musée de l'homme, No. 41.19.333; cf. Lhote 1947a, Fig. 4 (2) p. 39, p. 118, photograph 50 p. 81).

From the Kel Dennek:—

(6) A rectangular slightly curved cross-bar having geometrical ornamentation on the inner side. At the middle of this there is a funnel-shaped thickening with a round hollow to support the central post, and four round holes for cord attachment at the corners. It is 0.55 m long, and bears geometrical ornamentation on the inner side (cf. Nicolas 1950a, pl. VIIIa p. 155).

(7) A slightly curved cross-bar with a square hollow at the middle to support the central post. The inner side has geometrical decoration, and there are four triangular holes for cord-attachment. It is 0.35 m long (Nicolas 1950a, pl. VIIIb p. 155).

(8) A rectangular slightly curved cross-bar with geometrical ornamentation on the inner side. It is 0.61 m long, 0.15 m wide, and 0.02 m thick. It has a funnel-shaped thickening of 0.08 m with a round hollow to support the central post. There are four triangular holes at the corners of the cross-bar for cord-attachment. The cross-bar is in the IFAN Museum at Niamey and belongs to the tent described under B.2.g.6.

From the Kel Ataram:—

(9) A slightly curved cross-bar with a funnel-shaped thickening in which is carved a hollow to support the central post. There are four triangular holes for cord-attachment (Musée d'Ethnographie, Neuchâtel, No. 48.6.18).

It appears from the description of these specimens that the cross-bar of T-shaped posts are more or less curved and comparatively thin except at the middle where a hollow is carved for the post. The bulk of the cross-bars mentioned have holes for cord-attachment, and this seems to hold for all cross-bars used in Southern Tuareg groups. In Ahaggar cord-attachment is not always employed, but it is said to be extremely useful, as the tent may collapse owing to the very heavy winds so characteristic of desert climate. Thus it may seem as if the main function of the cords fastened to the cross-bar of the T-shaped post is to keep the latter upright.

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I believe that cross-bars, and particularly those that are richly ornamented, are manufactured by blacksmiths and not by pastoral Tuareg, though they may perhaps also be made by noble women who among the Northern Tuareg are skilled in wood-work. In fact, it is claimed by Tuareg of the north that skin tents with T-shaped posts are the traditional type of dwelling of noble Tuareg and Tuareg of the *Iregenaten* tribe, which latter is said to descend partly from noble Tuareg (matrilineally) and from Arabs (patrilineally). The vassal Tuareg of Ahaggar say that T-shaped tents are not traditional to them. They use tents of B.2.f. type with pairs of forked poles carrying horizontal cross-bar, and this type seems to have supplanted skin tents of arch construction. It may happen that vassal Tuareg

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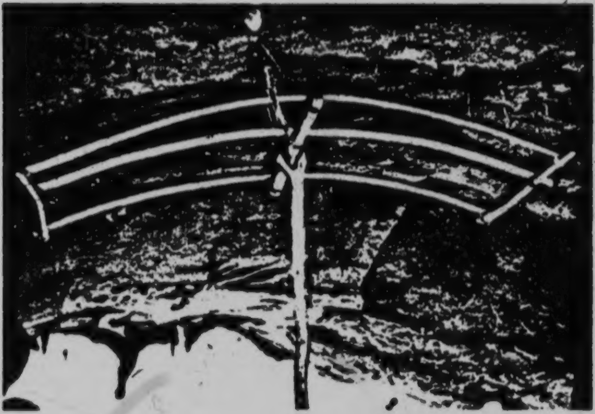

Fig. 283. Cross-bar (*tamankayt*) of the B.2.g.7 type. Ahaggar Tuareg of Tamesna, the *Ireğenaten* tribe.

in case of very extreme heat in the summer make a kind of primitive T-shaped post from a simple bough of tamarisk, to the top of which they attach a short stick of the same material. They then wrap pieces of old cotton around the place of attachment in order that the post shall not gall the sheet. [114] But though I have lived among vassal Tuareg of Ahaggar over extremely long periods of the hot season I have seen such primitive T-shaped posts only once. As already stated T-shaped posts seem to be advantageous also during heavy showers of rain as the water quickly runs off the sheet. However, I have never seen vassal Tuareg use simple T-shaped posts in case of heavy rainfall, for they content themselves with holding a stick or pole against the sheet as long as rain falls. Primitive T-shaped posts like those just described from Ahaggar and consisting of a simple post at the top of which a short horizontal stick is attached, seem to be a mere imitation of the true T-shaped posts. However, there is another and very interesting type of T-shaped post, which I describe below under the two headings: —

[361] B.2.g.7. This tent I saw in a camp of *Ireğenatén* Tuareg not far from I-n-abanɾerit in the Tamesna Plains. The tent had two pairs of forked sticks (*tiğeʃʃewin*) each pair carrying a horizontal cross-bar (*areğareğa*). These forked sticks with their cross-bars were about 0.70 m high. While these sticks were buried in the ground there was between their two cross-bars a central forked post (*ağet*) about 1.20 metres high. In its prong it carried a most unusual cross-bar called *tamankayt*. This consisted of a wooden frame 1.44 m long and 0.72 m broad made from three long sticks attached to three short ones the middle one of which was particularly heavy and rested in the prong of the central post (cf. Fig. 283). The short sticks were parallel to the two outer cross-bars and at right angles to the longitudinal direction. In other words, the length of this cross-bar frame followed the longitudinal direction of the tent, but in spite of this we can speak of a cross-bar placed at a right angle to the longitudinal direction, as one of the short sticks of the frame rests upon the central post. The frame-like cross-bar was not fastened to the outer cross-bars with cords, and the central post was not buried in the ground.

*342 The sheet rested upon the cross-bar frame and upon the outer cross-bars, being fastened to poles at the back and the front; it was kept close to the ground at the narrow ends where it was fastened to small wooden pegs. The tent sheet measured about 6.00×4.00 m and had five *taṛda* (cf. p. 362). The whole structure was made of boughs of the *tamat* acacia (*Acacia flava*).

B.2.g.8. The tent to be described under this heading is used among the *Kel Dennek*. It is structurally akin to the ordinary *Kel Dennek* tent mentioned above as B.2.g.6. (p. 379) but it is provided with a cross-bar frame much like that just mentioned from the *Iregenaten* Tuareg. The type is described by Nicolas. The central post is called *tageṭṭut*, and has a prong at its top to support the frame known as *agegu* made from two sticks to which are tied three other sticks, one of which rests in the prong of the central post. The stick which rests in the prong is placed parallel to the longitudinal direction of the tent, and cords are fastened to the cross-bar frame and to four sticks as customary for *Kel Dennek* tents. Nicolas says of this cross-bar frame that it is a cross-bar "de fortune" (cf. Nicolas 1950a, p. 154 Fig. 30 f.). He does not mention this type of cross-bar in his 1938 study of Tuareg tents, and we may perhaps take this as a proof that it is not very common among the *Kel Dennek*.

One might perhaps be tempted to take these two cross-bar frames as primitive types from which other types of cross-bars have developed, the evolution thus passing from the more elaborate to the more simple type. This, however, is hardly possible. It seems difficult to conceive the framelike cross-bars as a true development from a particular type of dwelling. They are most probably a kind of emergency cross-bars used because the more general type, which is made by blacksmiths, is not available for some reason or other. The ordinary type of cross-bar is no doubt the traditional and the oldest type. I revert to this again later in this chapter in my final analysis of Tuareg tents. Here I content myself with the statement that it seems as though the evolution of T-shaped posts followed another direction. They did not originate from the structurally more elaborate cross-bar frames. It may seem remarkable that the term used for a cross-bar frame among the *Kel Dennek* (*agegu* according to Nicolas) among the Northern Tuareg (*agegu*) designates a tent arch (cf. p. 356, 367). This term, however, does not literally refer to "arch". It derives from the verb *gagg* which means to "to load" or "to be loaded" with something (cf. Foucauld 1951–52, I, p. 406 ff.). – I now come to my last [184] structural group of Tuareg skin tents. It is only represented among the Tuareg most to the southwest from where it has been recorded by Lhote:—

B.2.h. *Skin tents with two central oblique posts carrying a short cross-bar*

[101] B.2.h.1. The tent is found among the *Kel Inteser* Tuareg who live in the region of Lac Faguibine. It is supported by two central oblique posts which carry a slightly curved cross-bar of which a specimen collected by Lhote is conserved in the Musée de l'homme. It has a total length of about 0.45 m, and is 0.07 m broad. It has a decorated inner side and close to the edges two thickenings in which holes are carved for the two posts (Musée de l'homme, 41.19.870; cf. Lhote 1947a, Fig. 4 (2) p. 39, p. 117). Lhote has informed me verbally that the two posts are oblique, but that they do not cross each other, and that the cross-bar is also placed at a right angle to the longitudinal direction. – I revert to this type later as it contributes to our knowledge of tent development among the Tuareg.

In literature there are tent descriptions which I have omitted in my survey of Tuareg tent structures, 342*
partly because the descriptions are unclear, and partly because they clearly indicate tents which are
not erected according to any definite method (cf. Demoulin 1928, p. 159; Campbell 1928, p. 205;
Bernard quoted by Laoust 1930, p. 225).

Finally, I add that the sheet of skin is very commonly used for a kind of wind-screen among the
Tuareg. Such wind-screens are of two types:— (1) The sheet is attached to three or four sticks
buried in the ground. A wind-screen of this kind is depicted in Fig. 284a. It serves as a temporary shelter [574]
for visitors in a camp. (2) The sheet is supported by three or four sticks placed in one row with a long
stick resting horizontally in their prongs. Such wind-screens are seen in Figs. 284 b-c. They are used by
the members of a household in ordinary camps, and it is quite common to erect tents in this manner during
seasons when rainfall is not expected. Indeed, many Ahaggar Tuareg use their skin tents only for a part [182]
of the year, for skin tents are not too well adapted to the burning hot desert climate. If possible, many
Tuareg prefer to live in the shade of rocks and trees, and if efficient shade of this type is found the
skin tents are generally not erected. But the Tuareg will then erect part of the wooden structure, [352]
namely the forked sticks carrying cross-bars, as these elements serve not only as supports of the sheet,
but also for the suspension of skin bags and various domestic implements (cf. Fig. 106).

Capot-Rey writes that the Tuareg skin tents are also less waterproof than mat tents (Capot-Rey [114]
1953a, p. 225), but this is not correct. During the rains, as we have seen, skin tents are preferred by [182]
many Tuareg who at other seasons live in mat tents, and we have also seen that many Ayr Tuareg
will then cover their mat tents with skin. If skin tents were not well fitted for rain they would indeed
be very badly adapted also to the Sudanese zone where they are widely found among the Tuareg.

There can be little doubt that the use of skin sheets is very old, for all over the world we find 342*
them used for portable dwellings among people at primitive subsistence levels. It is also substantiated 171
by Feilberg that we have throughout the Near and Middle Easts isolated occurrences of skin
tents, and that these seem to have been more common in these regions in the past. Feilberg mentions
in particular the use of skin for tents among the Tuareg and among the Sluba of Central Arabia (cf.
Feilberg 1944, p. 144). When Feilberg wrote his book on tent development in the Near and Middle
East, a description of the structure of Sluba tents was not available. But later investigations have
intimated that some skin tents of the Sluba do not seem to be structurally related to ordinary Tuareg
skin tents, but rather constitute a kind of wind-screen (cf. Lundbæk 1962). I have mentioned above
that the Ahaggar Tuareg also use their tent skins as wind-screens, but it is evident that structurally the
normal skin tents in all Tuareg groups have nothing to do with wind-screens.

It is possible that the use of skin for wind-screens is extremely old among the Tuareg, but there 342*
seem to be some evidence that plaited grass mats for covering the true tents are older. We have 174
seen that among Tuareg who use mat tents (the *Kel Ayr* and the *Kel Geres*), the inner layer of mats
covering the dome-shaped top consists of *éwerwer* mats made of plant stems tied together, and it has
also been mentioned that certain arched tents among the *Kel Dennek* and the Sudanese *Béllа* are
covered exclusively with mats produced on this principle. According to Duveyrier mats of straw were
formerly used for tent covering among the Northern Tuareg, and it is possible that the *afezu* mats,
which seem to constitute the walls of all Tuareg skin tents, may be considered a survival from tents

*342 174 covered exclusively with straw mats. Tuareg skin tents may perhaps have originated from tents covered with grass-mats which had the dome-shaped top covered with a sheet of skin during the rains. At all events I assume that most Tuareg skin tents have developed from a type of barrel-vaulted dwelling, and it is most significant that rudiments of arch constructions occur in skin tents within all Tuareg groups.

The development of Tuareg tents is difficult to explain by mere reference to environment, and we should also try to take into consideration/historical factors. I believe that tents with upright forked poles which carry horizontal cross-bars developed from a barrel-vaulted structure. I believe that this is indicated by the material presented above. Thus most or all barrel-vaulted dwellings among the Tuareg have at their narrow ends a pair of forked poles with a horizontal cross-bar placed at right angles to the longitudinal direction and parallel to the arch or the arches which are placed in the middle of the tent. We have also noted that we have tents of one central arch and two outer pairs of sticks with cross-bars covered with two semi-arches, and tents in which this middle arch is substituted by a pair of sticks carrying a cross-bar. It seems quite natural to consider all tents supported exclusively by pairs of sticks carrying horizontal cross-bars as deriving from barrel-vaulted dwellings. One would perhaps then be tempted to suppose that such an evolution took place in the true desert country, where it might seem easier to make tents from a certain number of sticks tied together than from curved arches. However, as far as our knowledge goes, an evolution of portable dwellings among the Tuareg from arched types to types exclusively consisting of cross-bars resting in forked sticks seems to have taken place outside of the proper desert country. All old Tuareg of Ahaggar admit that the common type of tent structure in their childhood was that of two arches, while these arches, they say, have [114] now been replaced by cross-bars resting in pronged poles. This agrees with the fact that Foucauld, who lived in Ahaggar from 1905 to 1916, does not mention tents of the cross-bar type which are now almost exclusively used by the Ahaggar Tuareg. According to Foucauld, Ahaggar tents fall into two main types, namely those supported by arches and those supported by T-shaped posts. When the structure made exclusively with forked poles and cross-bars was adopted we do not know, but I believe [114] that it may perhaps have taken place in the twenties. In any event there seems to be little doubt that they were common at the end of the twenties, for they are depicted by Moberg from his journey to *342 178 Ahaggar 1929-30 (cf. Moberg 1933, p. 59, 63, 65). The question now arises why the Ahaggar Tuareg gave up their arched dwellings, which are so extremely rare nowadays, and adopted the upright forked poles-crossbar structure? Lhote thinks that in Ahaggar there were perhaps the following reasons: (1) The arched structure is better adapted to rain, but has become less useful owing to the increasing dryness of Ahaggar; (2) It is more difficult to procure the long roots of tamarisks for arches; (3) The arches used in ancient times were difficult to carry from camp to camp; (4) The structure consisting of cross-bars resting in forked poles may perhaps have been introduced owing to contact with the *Iwllemmeden*, who use a similar type of tent-structure (cf. Lhote 1947a, p. 42 f.; 1955a, p. 256). Of these arguments I find the last the most convincing, the more so as I have myself been informed that the tents of cross-bars resting on forked prongs have been introduced owing to contact with the Southern [582] Tuareg who have similar tents. One might perhaps assume that the tent was actually introduced owing to contact with the *Kel Adrar*, as the Ahaggar Tuareg have married women of that Tuareg group

[text continues on p.388]

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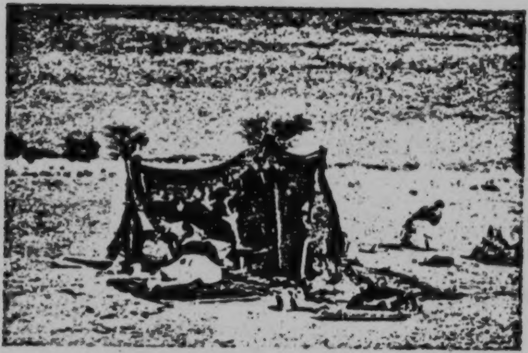

Fig. 284a. The skin sheet erected as a wind-screen for visitors. Ahaggar, the *Kel Ahnet* tribe.

[291]

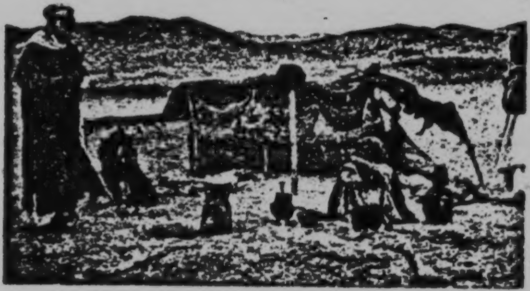

Fig. 284b. The sheet erected as wind-screen in a Tuareg camp. Ahaggar, the *Afuk-entehlé* tribe.

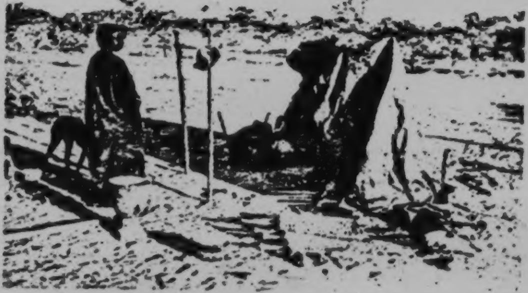

Fig. 284c. The sheet erected as wind-screen in a *Bélla* camp near Ayoru on the Niger.

*342 178 582 while to my knowledge they have never married women of the *Iwllemmeden*. Marriages seem to be of great importance for the diffusion of cultural traits among the Tuareg.

*342 174 182 It is clear that the use of T-shaped posts is not limited to particular environmental zones, for T-shaped posts are characteristic of certain Tuareg skin tents both in the true desert country and in southern regions of plains and savannahs. Furthermore, it seems as if this structure is found mainly among the Northern Tuareg, the *Kel Adrar*, and among the *Kel Dennek*, while outside these regions T-shaped posts are rare. Thus if we cannot explain the use and the distribution of T-shaped posts in skin tents from an analysis of environment, we may perhaps ascribe its present distribution to historical events.

*342 174 The most important characteristic of T-shaped posts is that they are not buried in the ground like all other poles and posts of Tuareg portable dwellings. They rest upon the surface, and if they sometimes penetrate two or three centimetres into the soil this is not to keep them upright but to prevent them from sliding. The fact that Tuareg T-shaped posts are not buried in the ground makes it unlikely that they are related to the T-shaped posts of permanent dwellings like those used in huts and houses of North Africa, and I believe that originally they came from a barrel-vaulted dwelling which had one of its arches supported by a post resting upon the surface. That an evolution of this kind is in fact possible is shown by Ferdinand's description of certain black tents among the Duranni nomads of Afghanistan. The middle arch of these tents is made from pieces of curved poles, namely two long pieces lashed to a shorter top piece, which is supported by a central post resting upon the surface of the ground. This is the normal structure of Duranni tents, but in summer and in spring nomads frequently content themselves with the erection of the middle part of the arch supported by the central post resting upon the surface. In other words, the Duranni nomads at certain seasons change their barrel-vaulted dwelling into a dwelling supported by T-shaped posts at a right angle to the longitudinal direction (cf. Ferdinand 1959, Fig. 7 p. 35). I think that this development is also perhaps responsible for the evolution of T-shaped tents among the Tuareg, but I do not believe that it took place among them. We have among the Tuareg no portable barrel-vaulted dwellings of arches supported by central posts. We find this principle in certain barrel-vaulted dwellings used among the *Kel Ewey* farmers of Ayr (cf. p. 347 ff.), but this barrel-vaulted hut originated from the Tuareg mat tent, which among the sedentary *Kel Ewey* adopted certain traits of the bee-hive hut.

*342 174 177 I think there is little doubt that a relationship exists between T-shaped posts of Tuareg skin tents and similar posts of North African black tents. This relationship was first suggested by Feilberg in his thesis on the black tent (cf. Feilberg 1944, p. 143), and I believe that it can be proved that such a relationship actually exists.

[184] Black tents are not generally used by the Tuareg. In the extreme north of the *Kel Ajjer* territory a few Tuareg have adopted it owing to contact with Arab pastoralists. It is possible that there are also Tuareg with black tents in the extreme south-west of Tuareg country around Timbuktu. There are black tents in this region (Jackson 1820, p. 23; Barth 1857–58, IV, p. 474 ff.), and it seems as if some Tuareg there occasionally live in them (cf. Delafosse 1912, I, p. 334). It is clear that the black tent is found within a large semi-circular belt enclosing Tuareg country from the Fezzan via Northern Sahara and the Atlas through Mauretania to Timbuktu (cf. Feilberg 1944, map II). It is also clear that there

have been for centuries much contact between the Tuareg and the regions dominated by the black tent and Arab pastoralists. 342* 174 177

Certain Arabs who have immigrated from the north to Tuareg country have adapted their original tent structure of black tents to the Tuareg sheet of skin. This is demonstrated in case of Arab pastoralist known as *Deremchaka* (Dermechaka = Ar. El-Mechākra) who live in the *Kel Dennek* country. These pastoral Arabs, who have been much influenced by their Tuareg neighbours, use two central oblique posts to support a very short cross-bar (*hómmár* in Arabic), placed at right angles to the longitudinal direction, and it seems as if they have no other wooden elements to support the sheet and no cord attachment to secure the posts in contrast to the *Kel Dennek*. The *Deremchaka* Arabs immigrated to *Kel Dennek* country from Southern Algeria at a date later than the 17th century (cf. Nicolas 1950a, p. 153 f., pl. VIIIc; p. 67 f.). They have probably taken this tent structure with them from Algeria, where it is common to use two central posts carrying a short cross-bar at a right angle to the longitudinal direction.

It would seem that we have another example of the introduction of structural elements of black tents into skin tents, namely the above-mentioned skin tent supported by two central oblique posts with a short cross-bar which is used among certain *Kel Inteser*. This structure resembles that of certain double-posted black tents used among Arab pastoralists in many parts of North Africa, and the *Kel Inteser* Tuareg seem to be Arabs by origin. This is stated by several authors (Delafosse 1912 I, p. 195; Mohammed Saïd 1903, p. 210 ff.; Richer 1924, p. 14; Marty 1920–21, I, p. 254 ff.), and a Tuareg of the *Kel Inteser* group whom I met in Ayr held the same view. There seem to be little doubt that the structure of *Kel Inteser* skin tents derives from black tents and from the Arabs who most probably were responsible for the introduction of black tents to Mauretania and the whole Western Sahara.

The use of black tents among the Western Moors seems to throw important light upon tent development in North Africa. These tents are mentioned in early literature. Labat says that the Moors of Arguin and the Niger have round and conical tents, and that the former are covered with material of goats and camels (Labat 1728, I, p. 262), while Saugnier and Park mention the occurrence of two central posts in Moorish tents (Saugnier 1799, p. 33; Park ed. 1923, p. 109). A more comprehensive description of such tents is given by Caillié who says that the *Brakna* use two central posts carrying a short cross-bar to support their black tents, which in winter has an interior tent consisting of a sheet of skin supported by poles (Caillié 1830, I, p. 130), and the use of two central posts crossing each other and carrying a short cross-bar on their tops is also mentioned recently from Mauretania (cf. Delpy 1955, p. 18, Fig. 7 no. 25). Douls depicts a black tent of pyramidal form from Rio del Oro (Douls 1888, p. 22 f.) and it would seem that this tent corresponds structurally to the type now in general use among the Moors of Mauretania and described or depicted by several authors (cf. Ould Hamidon 1952, ill. p. 41; Dubié 1953, p. 134, 162; Gabus 1955, ill. p. 72; Meniaud 1912, II, pl. X, p. 48). The particular structure of black tents among the Western Moors is due to the fact that it contains a barrel-vaulted dwelling covered with canvas. This barrel-vaulted dwelling constitutes the only type of dwelling of the Moors in the dry season, but during the rains and when it is extremely hot it is covered by the black tent (cf. Urvoy 1942, p. 33 f., Fig. 2, pl. I, Figs. 3,4). Thus the partic- 342* 171 175

Thus the partic-

*342 171 174 ular structure of black tents among certain Moors is due to a combination of two dwelling types: the black tent which has apparently been introduced by the Arabs coming down along the Western Sahara from the north, and a barrel-vaulted portable dwelling which we may perhaps conceive as the type of dwelling used in ancient times by the Tuareg of these regions who were conquered by the Arabs.

*342 171 177 If we turn to Tuareg skin tents supported by one central post with a short cross-bar, we may well assume that this particular structure, the so-called T-shaped post, has not only been introduced owing to influence from the black tent, but that it is also largely the result of contact with the Arabs. We know from Duveyrier that the Tuareg of the *Kel Ajjer* have skin tents and in some cases black tents also, and that these dwellings are identical in structure (Duveyrier 1864, p. 403 ff.). It is also certain that the Arabs who live in the region of Tidikelt use T-shaped posts both for black tents and for skin tents. This is recorded (cf. Laoust 1930, p. 224). I have myself gathered the same information from the *Ulad Ba Ḥammu* Arabs among whom I saw a black tent supported by a T-shaped post. Again, if we turn to the *Kunta* Arabs who live north of the Niger Bend, we find that they use for their tents skin sheets which they obtain from the Tuareg (cf. Geneviève 1950, p. 1125), and from one of my friends, a *Kunta* Arab living at Agadez, I obtained the information that the *Kunta* use a T-shaped post for their tents which are made of skin or canvas, though in very large tents they use two T-shaped posts.

*342 171 It is very interesting that an investigation of the distribution of T-shaped posts further north in Africa seems to indicate that this particular structure in black tents is found among the Arabs, but not among the Berbers. I have been told by the *Chamba* Arabs of Metlili that they use T-shaped posts in their black tents. Further north I have seen tents with a T-shaped post among Arabs who live in the central part of the Sahara Atlas. I may say that Lieutenant Millot, who has an intimate knowledge of the large pastoral Arab tribes *Rebaya* and *Ferjân* living around El Oued and the great sandy desert of Erg Oriental, told me personally that these Arabs use single T-shaped posts in their tents. We can add to this Feilberg's detailed investigation of black tent structures with a T-shaped post from Eastern Algeria, Tunisia, and from the *Ulad Ali* nomads (cf. Feilberg 1944, p. 146). It is interesting to note that Feilberg has also found T-shaped posts in black tents among Arab pastoralists of Syria and Central Arabia (Feilberg 1944, p. 146).

*342 171 174 I am not going as far as to claim that the black tent was introduced to North Africa by the Arabs, though this may well be so (cf. Nicolaisen 1959, p. 119 ff.), but I think that the present extensive distribution of black tents in the Sahara must be due to them. This seems quite evident when we consider Feilberg's map of the distribution of black tents in Northern Africa, which also shows that the distribution of black tents is not limited to environment of a definite type (cf. Feilberg 1944, map II). Laoust long ago pointed out that black tent vocabulary in Morocco is derived largely from Arabic (Laoust 1930, p. 168 f.). This has later been emphasized even more by Delpy who thinks that all the present black tents of North Africa, including Mauretania, have been introduced by the Arabs. However that may be there is no doubt that Leo Africanus does not refer much to the use of black tents which have acquired their present wide distribution in Northern Africa later than the 16th century A.D. (cf. Delpy 1955, p. 15 f.).

*342 174 177 I conclude my analysis of Tuareg T-shaped structures by saying that this structure is foreign to

traditional Tuareg dwellings having been introduced by contact with the Arabs who use black tents. 342
I believe this to be the most reasonable explanation, and I think that at all events there is one important 174
factor which points to a connection between T-shaped posts in Tuareg skin-tents and similar posts 177
in Arab black tents:— Where T-shaped posts are known to be a traditional type of dwelling, as is [823]
the case among the Northern Tuareg and the *Kel Dennek*, skin tents are always placed with the broad entrance side towards the south, which is also the tent orientation of the adjacent Northern Arabs with black tents. Where barrel-vaulted tents covered with mats form the predominant type of portable dwelling the orientation is different. This, anyway, is the case with the *Kel Ayr* and the *Kel Gerez* who live almost exclusively in barrel-vaulted mat tents which have the broad entrance side turned westwards. This difference in orientation can hardly be accidental. It rather points to a historical connection between the Tuareg groups who possess T-shaped structures and the Northern Arabs who own black tents. It may also be added that both among the Northern Arabs and the Northern Tuareg it is customary to divide the tent into two parts the left (western) one being reserved for the woman, the right (eastern) part for her husband.

Finally, the theory I have advanced about the origin of Tuareg T-shaped posts in skin tents seems to be substantiated by the distributions of other cultural traits mentioned in the previous chapter, for certain traits which seem to have been introduced by the Arabs, e.g., Arab riding saddles for women, seem to occur mainly where T-shaped posts are prevalent.

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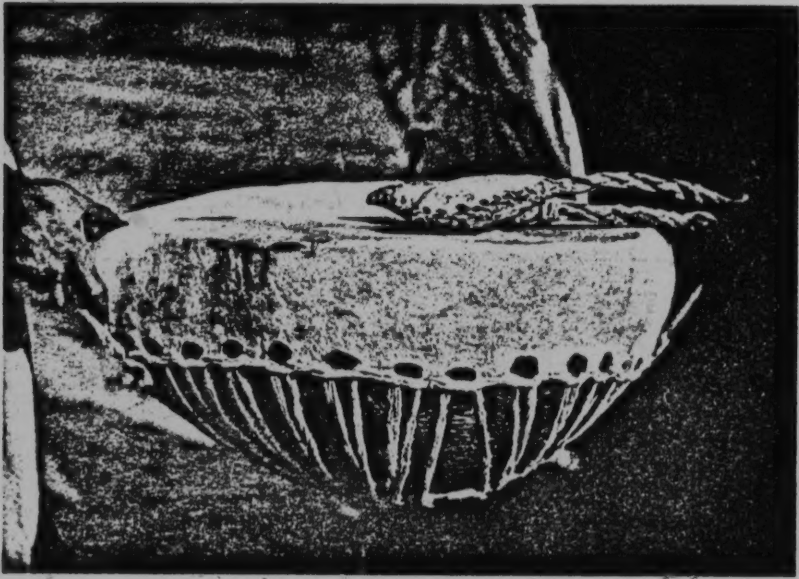

Fig. 285. The drum (*ettebel*) which is the only insignia of the *Kel Ferwan* drum-chief. Similar drums are found in other Tuareg groups.

Political Systems of Pastoral Tuareg

In the introductory chapter on the Tuareg I mentioned that they fall into a number of main groups. 181
These groups or federations constitute the largest political units and are the following:— the *Kel* 642
Ahaggar, the *Kel Ajjer*, the *Kel Adrar*, the *Kel Ayr*, the *Kel Geres*, the *Iwllemmeden Kel Dennek*, and
the *Iwllemmeden Kel Ataram*. The federation of *Kel Tadenaket* in the region of Timbuktu was subjected to the *Iwllemmeden Kel Ataram* from about A.D. 1800 (cf. Richer 1924, p. 96). In this chapter I attempt to outline the structure of some of the federations, and to consider certain problems connected with their historical development.

The two groups of Northern Tuareg which are so intimately related to one another, both culturally 173
and linguistically, formed originally one large political group under the command of the very powerful 642
noble tribe, the *Imenan* in the region of Ganet. It was not only considered noble to a very high degree, 614
but it was very highly estimated because of its supposed relationship to the Prophet. Many noble 565
Tuareg to-day, both in Ahaggar and in Ayr, will claim themselves to be *Echcherifen* through relationship to the ancient *Imenan*, whose leader was the supreme chief of all Tuareg of Ahaggar and Tasilé-
n-Ajjer until about A.D. 1650 or somewhat later in the 17th century. The *Imenan* about that date [669]
lost their power owing to insurrections led by the powerful noble tribe, the *Uraren*. A Tuareg of this [643]
tribe killed the supreme chief named *Guma* and the leadership of the *Kel Ajjer* now passed over to the chief of the *Uraren*.

The political system of the Northern Tuareg in the 19th century has been described in some detail 175
by Duveyrier with particular reference to the *Kel Ajjer* among whom he lived in 1859 (cf. Duveyrier 64
1864). Among the authors who visited the Northern Tuareg in the 19th century Duveyrier is by far the most important, and his brief description of political organization is of particular value.

When the *Imenan* lost their supreme authority owing to the rising of the *Uraren*, they retained 643
their titles of *Imenukalen* (sing. *Amenukal*), which are used for all descendants of the *Imenan*, their [619]
women even to-day being known as *Timenukalin* (sing. *Tamenukalt*). The chief of the *Imenan* was still "the *Amenukal*", a title used for supreme and independent chiefs of large political units. It is a word known to all Tuareg, and there have been some discussion about its proper meaning. The meaning according to Duveyrier is "the owner of the land" (Duveyrier 1864, p. 331), and this interpretation is that generally followed by modern authors (e.g., Lhote 1955, p. 189; Blanguernon 1955, p. 47), though Foucauld does not go into the proper meaning of the word *Amenukal* but contents himself with the statement that it is the title of "a chief who is not subjected to any other chief" (Foucauld 1951-52, III, p. 1213 f.). According to Prasse *Amenukal* is very probably a composit of

643 *amenu* + (*a*)*kal*, "*amenu* of the country". The first part may be the now extinct sing. of *Imenan*, the
original meaning of which is unknown ("princes"?); this agrees with Foucauld's statement that
normally *Amenukal* is used as sing. of *Imenan*, meaning *iyen daṛ-Menan*" = "one of the *Imenan*
tribe" (Prasse, verbal information). My own view is that though the title may perhaps refer to *akal*
[423] meaning "land" it is to be doubted whether it contains the meaning of "ownership". It is evident,
as pointed out recently by Briggs, that an *Amenukal* as a supreme chief does not own the land in any
ordinary sense, but rather owns it as a representative of the whole community (cf. Briggs 1958, p. 88).
However, many Tuareg of the south do not connect the word *Amenukal* with "*akal*", and even in
the past when the supreme *Amenukal* of the *Imenan* reigned over the Northern Tuareg, he apparently
did not have the supreme command of the whole country. When Duveyrier stayed among the *Kel*
173 *Ajjer*, the country of these Tuareg was divided between certain noble tribes. This division was said
631 to have taken place in the following way:— The first Tuareg who settled in Tasilé-n-Ajjer were the
614 *Imenan* and the *Ifoṛas*, while other tribes immigrated at a later date. It happened one day in the past
that the supreme chief of the *Imenan* summoned the noble women who had sons with rights of succession to chieftainship, and to each of these women he alloted a particular territory as their apanage.
Thus the noble woman of the *Uraṛen* tribe was given the valley of Iṛarṛaren, while the noble woman
of the *Imanṛasaten* tribe gained the valley of Tekhammalt (cf. Duveyrier 1864, p. 323). According to
this popular account the land of the *Kel Ajjer* was divided between noble tribes even at a time when
175 the supreme chief of the *Imenan*, the *Amenukal*, was the supreme ruler of the *Kel Ajjer*. In Duveyrier's
631 days the important land-holding tribes among the *Kel Ajjer* seem to have been the *Imenan* in the
614 Tasilé around Ǧanet, the *Uraṛen* north of the Tasilé Mountains around the valley of Iṛarṛaren, the
Imanṛasaten east of the *Uraṛen*, and finally the *Ifoṛas* who lived in the region south and southwest
[566] of Ṛadames. The *Ifoṛas* Tuareg were then, as to-day, held in high esteem because of their position
as *Ineslemen*. They also claimed themselves to be noble by origin. They had no vassals attached to
them, but one of the *Ifoṛas* tribes had territorial rights around Ṛadames, and it had the right to dues
[631] from all foreign caravans passing through the country. Other land-holding tribes possessed the same
rights for their particular territories, and their members (i.e., apparently their chiefs) at certain seasons camped around the caravan roads leading through their country to collect dues from caravan
[643] traders (cf. Duveyrier 1864, p. 334 ff., 359 ff.). The *Kel Ajjer* country in Duveyrier's days was divided
between various noble tribes, and the supreme chief of the whole *Kel Ajjer group*, the chief of the
Uraṛen, had no rights over the whole country as such.

565 The noble Tuareg among the *Kel Ajjer* had rights over certain vassal tribes which did not necessarily
614 live within the territory of the noble tribe to which they were attached. Duveyrier tells us so much
642 of this vassalage that it is possible to outline the main structure of this very interesting political
institution.

The noble tribes which had particular rights over vassals were the *Uraṛen*, the *Imenan*, and the
Imanṛasaten. The last-mentioned tribe remained loyal to the ancient rulers of the *Kel Ajjer*, the *Imenan*,
to whom they constituted a sort of armed guard in the past. The *Imanṛasaten* were in opposition to
the *Uraṛen* but the latter tribe was very powerful because of its direct authority over most vassal
tribes. In all 17 vassal tribes or tribal sections were commanded by the *Uraṛen*, while the *Imenan*,

had five vassal tribes, and the *Imanṛasaten* only three. Four tribes were divided between the *Uraṛen* 565
and the *Imenan*, and one vassal tribe was divided between all three noble tribes. 614
642

The *Imenan* in Duveyrier's days comprised only five men who lived like sedentary Arabs at Ġanet and Ṛat; they held the titles of *Imenukalen*, and their chief was "*the Amenukal*" who still possessed the drum (*eṭṭebel*) as the symbol of his former power. But the *Imenan* had no political power, and Duveyrier says that they were not allowed to summon their vassals to war. The true political leader 643
of the *Kel Ajjer* was the chief of the *Uraṛen* with the title of *Amṛar*, but he was not the most important person. The practical leader of all Tuareg of Tasilé-n-Ajjer was the famous Tuareg known as *Akhenukhen*, whom Duveyrier called *Emir*. He had not accepted the position as *Amṛar* because this would have obliged him to give up his nomadic life and take up residence in a house. *Akhenukhen* held the supreme political and judical authority not only over the particular vassals of the *Uraṛen*, for all Ajjer Tuareg also submitted to his orders. However, we know from Duveyrier's description that 614
the other noble tribes had the right to engage in raiding expeditions on their own behalf sup- 721
ported by their individual vassals, and it was not always easy for *Akhenukhen* to keep order. However, as leader of the bulk of the vassal tribes which were loyal to their master, he could retain the dominant position of the *Uraṛen* tribe, and in difficult judical problems he was aided and supported by the religious leaders of the *Ifoṛas* group.

The noble tribes of the *Kel Ajjer* were subdivided into tribal sections which had their particular vassals. 565
It seems as if this division of vassalage was primarily an economic one. Thus the chief of the *Uraṛen* 614
possessed the supreme political authority over all vassals attached to his tribe though he only had 613
particular economic rights over part of them (cf. Duveyrier 1864, p. 334 ff. & Dubief 1956, p. 87). I revert to these important features of political systems among the Northern Tuareg in a more detailed account of political relations in Ahaggar.

KEL AHAGGAR

The Ahaggar Tuareg became politically independent in the 17th century when the supreme chief 173
Guma of the *Imenan* was killed and the power over the *Kel Ajjer* passed into the hands of the *Uraṛen*. 614
The Ahaggar Tuareg may even then have obtained their own supreme chief, but we know almost 642
nothing about this early period. The supreme chiefs of the Ahaggar Tuareg, who have the title of 643
Amenukal, are known as far back as to about 1750 when the ruler was *Sidi ag Mokhammed el Khir*.
During his reign the Ahaggar Tuareg became divided into three major groups centering around the 173
noble tribes known as *Kel Ṛela*, *Taytoḳ*, and *Tégehé Mellet*. These tribes divided the vassals between 565
them. The *Taytoḳ* and the *Kel Ṛela* until then formed one single tribe, and their members even to-day 614
claim to be matrilineally related as *ara-n-tañatin*, that is "persons descending from sisters", for the 642
ancestress of the *Kel Ṛela*, by name *Kella*, and the ancestress of the *Taytoḳ*, whose name was *Sakina*, were in fact maternal cousins (cf. p. 140). The third noble tribe, *Tégehé Mellet*, to which vassals were allotted, is said to descend patrilineally from Arabs – perhaps from the *Chamba*. There were two other noble tribes among the Ahaggar Tuareg at this early date. One of them known

173 as the *Ikadeyen* had no vassals and its members had apparently then as now a rather subordinate
565 position compared with other noble Tuareg. The noble tribe named *Kel-ahem-mellen*, which to-day
614 is of little importance and not very numerous, with some of its members settled in the oasis of
642 Inṛer in Tidikelt, seems to have had certain *Iseḳḳemaren* tribes as its particular vassals, but they were
later placed under the *Kel Ṛela*, the *Taytoḳ*, and the *Téġehé Mellet*. The *Iseḳḳemaren*, as we shall
see below, had a political status somewhat different from that of the true vassals known to the Northern
Tuareg as *Kel Ulli* or *Imṛad*. The division of the vassals of this group during the reign of *Sidi ag
Moḳhammed el Khir* between the three noble tribes of *Kel Ṛela*, *Taytoḳ*, and *Téġehé Mellet* is most
interesting. When the vassals were divided between the three noble units it led to a division of some
of the vassal tribes. Thus the *Ayt Lowayen* was divided into two between the *Kel Ṛela* and the *Téġehé
Mellet* while the tribe known as *Imessiliten* was divided into the *Dag Ṛali* for the *Kel Ṛela*, and the
Kel Ahnet for the *Taytoḳ*. It would have been easier to divide the vassals without splitting their tribes,
but we may perhaps suggest that the tribes were split because they were already divided into groups
of individual vassals under those who became independent noble tribes. When the division of vassals
took place in the 18th century most went to the *Kel Ṛela*, but quite a number of tribes was also allotted
to the *Taytoḳ*, while the *Téġehé Mellet* tribe received so few that it could never become politically
important.

When the vassals were divided between the *Kel Ṛela*, the *Taytoḳ*, and the *Téġehé Mellet* these noble
634 tribes became united into a sort of federation known as *téġehé*. The three tribes with their vassals formed
534 so-called drum-groups or *eṭṭebelen* (sing. *eṭṭebel*) with chiefs who had as their insignia a large drum
778 known as *eṭṭebel*. It was endowed with a particular mystic power; it should not be allowed to touch
the ground and when the drum skin was worn, it had to be replaced by a famed warrior. The drum
must be obeyed when beaten by the drum-chief to summon his subjects. The drum-chief was the
supreme political and judical authority of a drum-group, and he could organize raids and wage war
upon other groups. He also collected certain annual payments from his particular vassals. This was
631 true of the chiefs of all three drum-groups in Ahaggar. But within the federation of drum-groups
634 that of the *Kel Ṛela* held a prominent position. The drum-chiefs of the two other groups, the *Taytoḳ*
643 and the *Téġehé Mellet*, only possessed the title of *Amṛar* (pl. *Imṛaren*), which word is that generally
used for a chief among the *Kel Ahaggar*, while the chief of the *Kel Ṛela* drum-group had the title of
Amenukal as the chief of the whole *téġehé* federation. Within every drum-group the drum-chief would
ceremoniously install all chiefs of vassal tribes but the two drum-chiefs of *Taytoḳ* and *Téġehé Mellet*
were installed by the *Amenukal* of the *Kel Ṛela* group. The *Amenukal* himself was installed in his
565 office by a Tuareg from one of the *Iseḳḳemaren* tribes of his own drum-group. When the *Amenukal*
was installed, which ceremony nowadays takes place at Tamanṛaset, a Tuareg of the *Iseḳḳemaren*
class provided him with a large head-cloth. The installment ceremony, which is preserved to this day,
was and is the same for any chief among the Ahaggar Tuareg. When a drum-chief was to install a
vassal chief, the ceremony took place in the camp of the drum-chief, [illegible] when the *Amenukal* had to
install drum-chiefs of the two other groups the installation took place in the *Amenukal*'s camp.

The supreme position of the *Amenukal* appears from the rules governing the installation of chiefs,
but as already mentioned, the *Amenukal* could not concern himself in all matters of the two other

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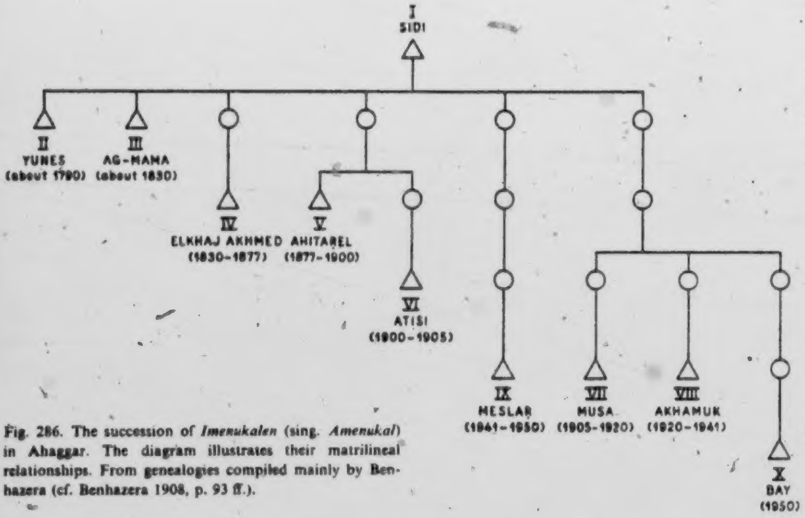

Fig. 286. The succession of *Imenukalen* (sing. *Amenukal*) in Ahaggar. The diagram illustrates their matrilineal relationships. From genealogies compiled mainly by Benhazera (cf. Benhazera 1908, p. 93 ff.).

drum-groups. The drum-chiefs alone were responsible for the election of vassal chiefs within their groups. The two other drum-groups were largely independent of the *Amenukal*, though the latter was considered the supreme judge in all matters which involved the whole federation, as he was the supreme war leader when the three groups united to fight other groups. It seems as if the *Amenukal* also had a certain religious prestige, and even to-day he goes to the Cherif of Issilessekin once every summer to ask the Cherif to intercede for him with Allah that the rain may fall and the she-camels be fruitful (cf. Morel 1947, p. 129). But the position of the *Amenukal* was very far from that of a divine king. Throughout the 19th century there were long periods in which the two other drum-groups cared very little for the *Amenukal*'s authority, and the *Taytoḳ* and the *Kel Ṛela*, though related to each other, were for long periods engaged in mutual quarrels. 631 634 643

In discussing the position of the *Amenukal* as the supreme chief of all Ahaggar Tuareg, we come to the question whether he was the true owner or commander of the whole country inhabited by the three drum-groups. On this question I have gathered much conflicting information. The noble Tuareg of the *Kel Ṛela* group, including the *Amenukal*, claim that in the past as at the present day the *Amenukal* had rights over the whole country of the Ahaggar Tuareg, while certain other Tuareg, including some old vassals of the *Kel Ṛela* group, say that the two other drum-groups possessed their own territories, the drum-chief of the *Taytoḳ* holding all rights over the country of Ahnet with adjacent sections of the western lowland of Ahaggar where some of the *Taytoḳ* vassals lived. I believe that this latter explanation is true and that throughout the 19th century the *Amenukal* was only the 643 634

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THE FEDERATION OF AHAGGAR TUAREG

(Size of tribes according to Lhote 1955a, p. 225 ff. from statistics of 1949.)

	Noble tribes		Vassal tribes		*Iseḳḳemaren* tribes	
The *Kel Ṛela* Drum-Group	*Kel Ṛela*	275	*Dag Ṛali*	386	*Iheyawen Hada*	253
			Ayt Lowayen	400	*Kel Inṛer*	176
			Ağuh-en-tehlé	585	*Kel Téfedest*	61
			Ṛelayddin	40	*Kel Immidir*	179
			Iklan-en-tawsit	500	*Kel Taẓulet*	158
			Ibettenaten	129		
			Ireġenaten	435		
	To-day many of them live in Tamesna. They intermarry with other noble tribes, with the *Ifoṛas* group, and sometimes with Arabs and their own vassal tribes. But women of pure noble stock will not generally be allowed to marry vassal men. The *Kel Ṛela* women, like noble women of the *Uraṛen* (Tasilé-n-Ajjer) and *Kel Ferwan* (Ayr), do not associate freely with people of other classes.		These two tribes are not true vassals by origin. The *Ibettenaten* is said formerly to have had noble status and the *Ireġenaten* descend matrilineally from the *Ibettenaten*, patrilineally from Arabs.		The *Iseḳḳemaren* tribes descend from mixed marriages between Arab men and Tuareg women or are Arabs who have become assimilated by the Tuareg. They are said formerly to have been the vassals of the noble *Kel-ahem-mellen* tribe. The powerful Arab tribe of Tidikelt, the *Ulad Ba Ḥammu*, claims that they were originally their vassals.	

643 territorial chief over the country inhabited by the vassals of the *Kel Ṛela* drum-group. He had the
634 right to dues from caravans passing through the territory of that drum-group, while further west
[651] such dues were given to the chief of the *Taytoḳ* drum-group. He had the right to land rents from the vassals of his groups, while land rents further west in the *Taytoḳ* country belonged to the drum-chief of the *Taytoḳ* group.

643 To-day the *Amenukal* holds a very strong position as chief of the whole country of Ahaggar, and
[648] his power has been much augmented because the French govern the country through him. In the past the position of the *Amenukal* was a less powerful one. All Tuareg say that he was then not particularly strong, and there are many examples of the vassals of his own drum-group showing disobedient
[565] to him. The *Amenukal* had to be elected, and, contrary to what is often stated in literature on the subject, he was not elected by the noble Tuareg of his own tribe, though they had a certain influence, but by his vassals who also had the right to dismiss an *Amenukal* if dissatisfied with him. The *Amenukal* lived like other Tuareg and his sole insignia was the drum which followed him on journeys and served to summon his vassals.

643 We have mentioned above (p. 148 ff.) that the *Amenukal* even to-day receives a land-rent (*ébéré-*
651 *n-amaḍal*) from all tenants of the sub-areas of vassal tribal territories, and the rules of payments and

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	Noble tribes	Vassal tribes	*Isekḳemaren* tribes
The *Taytoḳ* Drum-Group	*Taytoḳ* 33 There are hardly any Tuareg of pure *Taytoḳ* stock left in Ahaggar to-day. They are now in Tamesna together with their chief *Mokhammed ag Mokhammed* who possesses the drum. During a visit to Ahaggar 1954 he received as a gift 14 or 15 camels from his vassals still living in that region. Many vassals of the *Taytoḳ* drum-group also now live in Tamesna. The *Taytoḳ* and their vassals frequently intermarry, and such mixed marriages were also quite common in the past.	*Kel Ahnet* 127 *Iwerweren* 47 *Téġehé-n-Efis* 127 *Ikuṭṭisen* 84 *Ikechchemaḍen* (now mixed with the *Dag Ṛali* tribe of the *Kel Ṛela* drum-group). *Irechchumen* A tribe patrilineally related to the noble *Taytoḳ*, matrilineally to the vassal tribe of *Kel Ahnet*. In 1938 it comprised about 10 tents and 60 individuals.	*Kel I-n-tunin* (about 20 tents in 1938).
The *Téġehé-Mellet* Drum-Group	*Téġehé Mellet* 33	*Kel Turha* (part of the *Ayt Lowayen* tribe of the *Kel Ṛela* drum-group).	*Kel Terurit* 62 *Kel Uhet* 70
Noble Tribes Without Vassals	*Kel-ahem-mellen*	The *Isekḳemaren* tribes are said formerly to have been vassals of this tribe	
	Ikadeyen	Very few in number and mainly living at the small cultivation centre of Tit.	

rights have been outlined. These payments were also made to the *Amenukal* by people of his drum-group in the past, and then as now he received an annual tribute known as *tiwsé* from all vassal tribes. The size of such *tiwsé* payments in the past is unknown, but they have no doubt varied from one tribe to another as they do to-day. I describe in brief the *tiwsé* payments made by the two most important vassal tribes to illustrate this:— (1) The *Aġuh-en-tehlé* tribe is divided into three sub-tribes which make their *tiwsé* payments separately as follows: The *Kel Taṛhawhawt* sub-tribe gives 600 kgs of millet and, when grazing is good, 5 goats and 15 kgs of butter. The man who brings this payment to the *Amenukal* is rewarded with 15 metres of cotton. The *Isandan* sub-tribe gives 300 kgs of millet 643 651 643 651 614 613 565

643 and, when grazing is good, 2 goats and 8 kgs of butter annually to the *Amenukal* who rewards the man
651 bringing this payment with a gift of 11.5 metres of cotton. As to the *Kel Aṛefsa* sub-tribe its collective
614 payments are the same as those made by the *Isandan*. (2) The *Dag Ṛali* tribe pays *tiwsé* as follows:—
613 12 bags of millet (i.e., 3 bags from each of the four tribal sections) corresponding to 6 camel-loads,
565 are given to the chief of the *Dag Ṛali*. He sends 10 bags to the *Amenukal*, and keeps two for himself.
In case of good grazing the whole tribe gives 10 goats and 6 containers of butter to the *Amenukal*. –
All vassal tribes of the *Kel Ṛela* drum group make such annual payments to the *Amenukal*, and this
also applies to the *Iseḳḳemaren* tribes. These payments, known as *tiwsé*, are in fact tokens of vassalage,
[634] and are never made by noble Tuareg. The payments should properly belong to the *Amenukal* as
drum-chief of the *Kel Ṛela*, while vassal tribes of other drum-groups should make their payments to
their particular drum-chiefs.

643 The *Amenukal* had other rights over his subjects. He had the right to summon the vassals of his
634 drum-group to war and large-scale raiding, and he had the right to half of all war booty taken by his
565 vassals. This right was known as *abellaġ*, and the vassals of other drum-groups paid similar dues to
their particular drum-chiefs. Furthermore, we have seen that the *Amenukal* as the leader of the *Kel
Ṛela* drum-group could inherit livestock from such deceased subjects as had no living patrilineal
[614] kinsmen, though he would make no use of livestock thus inherited. The animals would remain in
the tribe to which the deseased person belonged under the supervision of the tribal chief (cf. p. 138).
As a drum-chief the *Amenukal* also had the right to the riding camel of any deceased vassal chief
[614] within his drum-group. This is also the case nowadays, but it should here be mentioned that the chief
of the very important vassal tribe, the *Dag Ṛali*, has the right to one of the *Amenukal*'s riding camels
on the latter's death.

643 As the supreme judge of his drum-group the *Amenukal* could claim various indemnities (*eddiyet*)
634 among which have been mentioned those paid for violation of the rights of his land-tenants (p. 151).
681 Even to-day the *Amenukal* can claim these and many other indemnities. In case of adultery, for instance,
[684] he can claim three camels from the seducer and one camel from the unfaithful wife. If a man catches
his wife committing adultery he has the right to kill her and the seducer on the spot, and formerly
[682] the families of persons thus killed had no right to revenge or blood-wealth. Neither was blood-wealth
paid in case of murder within the tribe, but the *Amenukal* might then claim an indemnity from the
[614] murderer. When the murderer and the person killed came from different tribes, blood-wealth had
to be paid to the family of the slain man by the murderer's kinsmen. The *Amenukal* could not deny
his subjects the right of revenge if they refused to accept blood-wealth, and if blood-wealth was paid
he had no right to any part from it. Blood-wealth was fixed at one hundred she-camels for a slain
man and fifty she-camels for a woman, but it may be doubted whether so many camels were ever paid.
[683] For bodily harm of various kinds there were other indemnities to be paid in camels (cf. p. 102), and
[178] such indemnities are perhaps made even nowadays, but blood-wealth and revenge have been abolished
[648] by the French, who have in many ways given the *Amenukal* more power over his subjects than he
had in the past.

178 To-day the authority of the *Amenukal* is almost unlimited. If, for instance, a man will not allow
643 his son to marry the woman he likes, the son may go to the *Amenukal* and ask him whether he

considers the marriage suitable, and if the *Amenukal* agrees the father will have to yield to his son. 178 643
If a man descending from parents of different tribes continues to live together with people of his 591
father's tribe after his father's death, the chief of his mother's tribe may complain to the *Amenukal*,
who will then order the man to take up residence with his maternal kinsmen. Nowadays the *Amenukal* can decide on the most personal problems of his subjects, and he is constantly visited by many
Tuareg desirous of obtaining his advice. To-day when the two other drum-groups in Ahaggar have
so to speak ceased to exist, the *Amenukal* has become the true supreme chief of all Ahaggar Tuareg
in all possible matters, while in the past he had very little official authority over the two other drum-groups, who fought him, and even within his own drum-group it was very difficult for him to
keep order. Sections and tribes among his own vassals frequently had severe quarrels with one another, 614
and the Tuareg say that once in the past the two tribes of *Dag Ṛali* and *Kel Ahnet* quarreled over 578
grazing grounds and fought each other, though officially their territories belonged to the drum-chiefs
of their respective groups. Again, we see that during the revolt against the French in 1916–17, the 648
drum-group of the *Kel Ṛela* did not act as a political unit. For though certain vassals followed the
Amenukal in his order not to revolt, there were many vassals of his group who disobeyed his order.

The *Amenukal*'s power was not a very definite one. And it is clear that it was most difficult for him 643
to prevent trouble between his subjects when he was not allowed to forbid them to take revenge in 642
case of murder. However, it seems as if he has had important functions as an arbitrator in cases of a
very different order, and that he was necessary to maintain the political system built up upon the
division of the people into different classes and castes. He was also important in all cases concerning
foreign policy, and he might call in for discussions of war and peace not only other noble Tuareg but
also the chiefs of vassal tribes. Thus in spite of the fact that the *Amenukal*'s orders were not always 645
obeyed there was a central government, and the *Amenukal* had three or four deputies known by the
title of *Khalifa* to act as his representatives. These *Khalifas* were elected by the *Amenukal*. At present
he has three *Khalifas* two of whom live with him in his own camp, while one lives in the Tamesna
area where many Tuareg of the *Kel Ṛela* drum-group now dwell. It is possible that in the past the 634
Khalifas were elected from the important noble sections of the *Kel Ṛela* tribe so that the central 614
government of the drum-group corresponded structurally to the government of most vassal tribes;
these have a chief (*Amṛar*) of the whole tribe which is subdivided into sections with *Khalifas* who
represent their sections towards the chief.

Throughout the 19th century whole groups of Tuareg outside Ahaggar paid an annual tribute 619
known as *tiwsé* to the *Amenukal*, to the drum-chief of the *Taytoḳ*, or to other prominent noble Tuareg 651
of Ahaggar in order to avoid raiding by the Ahaggar Tuareg. The noble Tuareg to whom *tiwsé* was
paid by such foreign groups was most frequently the *Amenukal* of the *Kel Ṛela* drum-group, and
the drum-chief of the *Taytoḳ*, but other influential noble Tuareg of the *Kel Ṛela* and *Taytoḳ* tribes
might also receive *tiwsé* payments from foreign groups in order that they might not be raided by
people belonging to these drum-groups. Some of these *tiwsé* matters are mentioned by Foucauld
(Foucauld 1951–52, III, p. 1347). The annual payments made for protection seem never to have been
very large. Thus I was told in Ahaggar that Tuareg of the *Kel Adṛaṛ* gave annually a skin tent and 643
a camel to the *Amenukal* of Ahaggar, and the *Kel Tédalé* tribes of Northern Ayr are said to have given
him a similar payment for protection.

619 him a similar payment for protection. In spite of these annual tributes foreign Tuareg groups were
721 frequently raided by the Ahaggar Tuareg. If foreign groups paying *tiwsé* to the *Amenukal* were raided
643 by people of his drum-group, the *Amenukal* had the right to a tribute named *ennehet* which according to Foucauld corresponded to about one third of the booty taken, and this payment should be made by all raiders, whether nobles or vassals. But raiders who were vassals of the *Amenukal*'s drum-group should also give him half of the booty left when one third had been given. If the foreign group raided complained to the *Amenukal* to whom they paid *tiwsé* for protection, he might return some of the animals taken, but never all (cf. Foucauld 1951–52, III, p. 1347 f.).

634 The drum-group (*eṭṭebel*) was the most important political unit among the Ahaggar Tuareg. The
[831] federation (*tégehé*) was for long periods split into quarrelling drum-groups. We have seen that quarrels might occur even within a drum-group which nevertheless remained a stable unit.

634 It seems as if the stability of a drum-group was partly maintained by means of a joking relationship
565 (*tehanḍeẓẓit*) between people of different classes. However, within the *Kel Ṛela* drum-group there
571 were tribes the members of which did not engage much in joking of this kind, and this was and is
614 true notably of the *Dag Ṛali* tribe which is considered one of the oldest vassal tribes in Ahaggar.
[602] People of the *Dag Ṛali* to-day have no joking relationships with anyone beyond cross-cousins and brothers and sisters-in-law (cf. p. 454 f., 465 ff.). Most other tribes within the *Kel Ṛela* drum-group joke with the tribes of the *Iseḳḳemaren* class. The word "*Iseḳḳemaren*" means literally "people who lie down upon the elbow supporting their head against the hand." People of this particular class is considered a kind of superior vassals because they are attached to no other noble Tuareg but their drum-chief. But nowadays, as in the past, they are spoken of disparagingly by both noble Tuareg and true vassals, who say that the *Iseḳḳemaren* in the past did not engage in warfare and raiding expeditions, and that these Tuareg are on the whole very weak. Most noble Tuareg and vassals will joke with the *Iseḳḳemaren*, and there is a particular strong joking relationship between the
[602] vassal tribe *Aġuh-en-tehlé* and the *Iseḳḳemaren* tribes. Such joking relationships are functionally
[431] related to joking relationships between relatives and in-laws and a fixed gift-exchange is observed between *Aġuh-en-tehlé* Tuareg and *Iseḳḳemaren* Tuareg when they visit each other. When the *Aġuh-en-tehlé* Tuareg come to the *Iseḳḳemaren* they must receive dates, while meat must be given to the *Iseḳḳemaren* visiting the *Aġuh-en-tehlé*. The *Aġuh-en-tehlé* tribe has the most intense joking relationship to the noble *Kel Ṛela* Tuareg of all vassals. These vassals and the noble *Kel Ṛela* engage in sham-fights (*tebbillant*) exactly in the same way as cross-cousins. This intense joking relationship between the *Kel Ṛela* and the vassal *Aġuh-en-telhé* should probably be explained in the light of the fact that the latter tribe was incorporated into the *Kel Ṛela* drum-group more recently than most other vassals.

The different Tuareg classes do not generally intermarry. There are very few marriages between *Iseḳḳemaren* and *Kel Ulli* vassals, though love-making between them is common and facilitated by their mutual joking relationship. This is true particularly for certain *Iseḳḳemaren* tribes (*Iheyawen Hada, Kel Taẓulet*) and the *Aġuh-en-tehlé tribe*. Wedding feasts in these *Iseḳḳemaren* tribes are most popular with young men of the *Aġuh-en-tehlé* who are free to make love to the *Iseḳḳemaren* girls. Between noble Tuareg and vassals of the *Kel Ṛela* drum-group there were in the past very few marriages, if any, while this was not so in the *Taytoḳ* drum-group, where marriages were contracted between

noble Tuareg and vassals. It would seem as if these mixed marriages had a political function as they 634
served to reinforce the solidarity within the drum-group in view of its opposition to the *Kel Ṛela* 565
drum-group and the *Amenukal*. In consequence of these marriages the political relations between 571
noble Tuareg and vassals of the *Taytoḳ* drum-group was in the past much influenced by rules of kin- 614
ship behaviour, and the payments due to the drum-chief from vassals were less comprehensive than [802]
in the *Kel Ṛela* drum-group.

The Kel Ṛela drum-group was divided into minor relationships between noble Tuareg and vassals. 634
These relationships were known as *temaẓlayt*, that is literally "the root of the nail". They have almost 565
ceased to exist, and consequently they are very difficult to describe. However, it is possible to outline 571
their organization and main functions. They were structurally akin to the drum-group, as they were 613
matrilineally organized. A noble Tuareg who had rights over certain vassals would be succeeded by a [178]
maternal kinsman, and in a group of vassals right and obligations would equally follow matrilineal rules. A *temaẓlayt* relationship was a relationship between a small noble matrilineage with a particular leader and a larger matrilineage of vassals of the *Kel Ulli* or *Imṛad* class. The noble matrilineage that was attached to a definite group of vassals would not necessarily correspond with the matrilineal core within a section, for there were comparatively many noble Tuareg in the *Kel Ṛela* tribe who were leaders of *temaẓlayt* groups. This is shown by Benhazera's investigations, which took place at a time when the ancient political system of the Ahaggar Tuareg still retained most of its traditional functions. At that time there were at least ten noble Tuareg who were commanders of *temaẓlayt* groups (cf. Benhazera 1908, p. 139 ff.).

There are certain traces of *temaẓlayt* organizations even to-day. The token of this relationship is the payment of an annual due known as *tiwsé* from a group of vassals to the *temaẓlayt* master.

Apparently some vassals who made *tiwsé* payments to a noble *temaẓlayt* master did not make this payment also to their drum-chief (the *Amenukal*). Thus to-day the *Ayt Loɣayen* tribe makes an annual *tiwsé* payment to *Maṛli agg Amayas* of the *Kel Ṛela* section named *Inemba Kel-Emeṛri*, but gives no *tiwsé* to the *Amenukal Bay*, who belongs to the *Iboglan* section of the same tribe, though the land-rent (*éhéré-n-amaḍal*) is always paid to the *Amenukal*. I was also told by the *Kel Ṛela Khalifa* of Tamesna, who belonged to the *Iboglan* section, that he had the right to collect the *tiwsé* payment from the *Isandan* sub-tribe of the *Aġuh-en-tehlé*, but as he was now living outside of Ahaggar this payment was made by the *Isandan* to the *Amenukal*. However, I believe that in the past most vassals of the *Kel Ulli* or *Imṛad* class made *tiwsé* payments both to their individual *temaẓlayt* masters and to the *Amenukal*. This would also seem to be in agreement with Foucauld's description of *temaẓlayt* relations (cf. Foucauld 1951–52, IV, p. 1965).

A noble *temaẓlayt* master had no judicial authority over his individual vassals, and could not summon 634
them to war and raiding against their will. These rights belonged to the drum-chief, consequently in 565
the *Kel Ṛela* group, to the *Amenukal*. The obligations of a noble *temaẓlayt* master towards his vassals 571
were mainly to protect them against raids by and exploitation of other noble Tuareg who formed a 613
class of warriors and raiders roaming the country for enemies and for booty. A *temaẓlayt* master had 721
the right to organize raids with the support of his vassals, if they were interested, and the vassals were also allowed to carry out raids on their own behalf, but in both cases half of the booty (*abellag*) taken by

634 565 vassals was given to the drum-chief (the *Amenukal*) and not to the *temaẓlayt* master. However, should
571 a vassal Tuareg have borrowed for raiding a riding camel from his *temaẓlayt* master or another noble
613 Tuareg, they received a tribute also known as *abellag*, comprising half of the booty remaining when
721 one half had been given to the *Amenukal*.

565 The noble Tuareg possessed many advantages over their individual vassals. They could apparently
571 claim almost what they wanted for their subsistence, and frequently camped close to their vassals who then were obliged to feed them, and when in need of riding camels the noble Tuareg could freely take such animals from their vassals (Duveyrier 1864, p. 334 ff.). Similar information is given by Benhazera, but he states that the vassals in the past would not necessarily supply everything demanded by their noble lords (Benhazera 1908, p. 54). The vassals were under a particular obligation to provide the noble Tuareg with goat-breeding products, and if they had milk yielding she-camels the noble Tuareg could claim these animals until milk-yielding stopped. But the vassals had also many advantages from the *temaẓlayt* relationships. They were not only protected by their lords. The noble Tuareg would leave behind the animals they could not take with them when roaming in the desert, and noble Tuareg never had much livestock with them in their camps. It was also of great importance to the vassals that they could use their masters camels for caravan trading. On the whole the system was not exclusively the exploitation of vassals by the noble Tuareg, and it can be added that the vassal Tuareg were always more numerous than the noble Tuareg, that the drum-chief (the *Amenukal*) was elected by the vassals, and that he alone had judicial rights. The system was one of give and take to both classes involved, and there can be little doubt that it was well adapted to practical ecological conditions.

233 In Ahaggar, camels and goats are very complementary to each other. The camel supplies the Tuareg
433 with milk, but with very few other products, and the Tuareg cannot always get milk from their she-
[234] camels which yield very little when pastures are dry. When grazing is good, camel's milk is important
[262] as food, but it is not well-fitted for churning butter, and cannot be used for cheese. Camels are occas-
ionally killed, but as their meat is not very suitable for drying, the Ahaggar Tuareg kill camels to
[281] utilize their meat only when many people congregate, as for instance at a marriage. Camel's hide is
not very important in Tuareg craft, for tanning is not practised, and Tuareg camels have little hair
which is used only for the manufacture of a few insignificant objects. To most Ahaggar Tuareg the
[437] camels have little direct economic value. But for raiding in the past, camels were very valuable riding
animals, and were then, as now, extremely important for caravan trading which provides the Tuareg
with most of their vegetable food.

The economic rôle of goat-breeding is very different. Goat-products play a very comprehensive
[234] part in Tuareg nourishment. Goat's milk is not only drunk, but is also made into butter and cheese
[262] which can easily be stored. Goat's meat is superior to camel's meat, and one goat does not contain more meat than can be eaten quickly by the members of a normal household. Furthermore, goats are very important in Tuareg craft; tents, waterbags, and containers for different sorts of liquid and solid food are made predominantly from their skin, which was formerly also employed for whole garments. Goat's hair is extremely useful as material for ropes with which domestic animals are tethered, camel-loads are fastened, and the like.

Pastoral Tuareg could not survive in Ahaggar without goats. They might be able to subsist without 233
camels, which can be replaced by donkeys as beasts of burden. But camels make life much easier to 433
the Ahaggar Tuareg, who nowadays, as in the past, base their economy mainly on camels and goats.
I think it is fairly correct to say that most Ahaggar Tuareg get their milk-food from goats and their [262]
vegetable food from caravan trading with the aid of camels.

Formerly, the true vassal Tuareg of Ahaggar were not allowed to possess camels, which were owned 565
exclusively by noble Tuareg. Foucauld says that 100–150 years ago the vassals had no camels, but 233
he does not mention his source of information (Foucauld 1951–52, II, p. 534). It is, however, confirmed 422
by many Tuareg that the vassals originally had no camels, and that throughout the 19th century they 571
had not many camels, while they were rich in goats of which the noble Tuareg had very few. Goat products were given to noble Tuareg by vassals, and even to-day goats and butter form part of the *tiwsé*-payments. The noble Tuareg, on the other hand, allowed their particular vassals to trade with their camels against the payment of a certain amount of vegetable food products which to-day also form part of most *tiwsé*-payments. They allowed their vassals also to have usufructs of such animals as could not be taken with them on their migrations. Noble Tuareg of to-day continue to claim food products and the like from their vassals. Poor noble Tuareg frequently ask gifts of the vassals, and there are even noble Tuareg who temporarily camp close to rich vassals from whom they obtain part of their food. Vassals may also lend their she-camels to noble Tuareg, who will return the animals when milk-yielding stops; this is considered an old privilege of the nobility. The noble Tuareg of to-day may ask vassals to render them minor services as, for instance, to guard domestic animals or to look for animals lost in the desert, and one noble Tuareg told me that he had camels guarded by
vassals. But nowadays the noble Tuareg have no rights over their vassals, who can refuse any gift or [178]
service demanded by noble Tuareg, and there are even noble Tuareg who wear amulets which are [789]
believed to induce vassals to donate the things required.

It would seem that the economic relationships forming the basis of the Tuareg political system in 174
the north would arise so to speak automatically from two distinct cultures which met each other in 565
the desert: a camel-breeding culture of a Berber-speaking people now known as the noble Tuareg, and a goat-breeding culture of an ancient Berber-speaking population which now constitutes the vassals.

Some Tuareg traditions seem to indicate that political systems based on class-division arose in this 173
way in the north, but we have to admit that other traditions contradict this. Below I attempt to 565
elucidate Tuareg history in Ahaggar by means of native traditions to which, for practical reasons, I allot definite numbers.

Tradition A. All Tuareg have a common origin as they descend from a woman named *Lemtuna*, who is also the ancestress of certain Berbers living around Ṛadamas in Tripolitania. Most Berbers of Morocco descend from *Lemtuna*'s sister who became the ancestress of the *Beraber*. This tradition is widely known in Ahaggar.

Tradition B.1. This tradition is a very common explanation of the origin of the class-division in Ahaggar: Long ago two Islamic women of the *Beraber* immigrated to the oasis of Silet from Tafilelt in Morocco. One of these women named *Ti-n-Hinan* was noble while the other woman named *Takama*

173 565 was the servant girl of *Ti-n-Hinan*. These two women settled in Ahaggar which was almost uninhabited. But in the mountainous parts of the country there lived a pagan people named *Isebeṭen*, who were goat-breeders and hunters. *Ti-n-Hinan* settled at the oasis of Abalessa not far from Silet, and she was buried in a huge tomb close to Abalessa, while her servant-girl *Takama* was buried in a small tomb not far from the tomb of *Ti-n-Hinan*.

Ti-n-Hinan became the ancestress of the two noble tribes *Kel Ṛela* and *Taytoḳ* who are matrilineally related. According to traditions collected by Benhazera, it seems as if two other noble tribes, namely *Kel-ahem-mellen* and *Téğehé Mellet* also descend from *Ti-n-Hinan* (Benhazera 1908, p. 90 ff.). This disagrees with my own information and also with that of Foucauld (cf. Foucauld 1951–52, II, p. 536). The two latter tribes are said to be of different origin, while the noble Tuareg of the *Iwllemmeden* descend from *Ti-n-Hinan*'s younger brother.

Takama had two daughters, the elder of whom became the ancestress of the noble tribe *Ihaḍanaren* who now live mainly in Tasilé-n-Ajjer, though a few individuals camp in Ahaggar. The tribe is considered noble but has never had vassals. The younger daughter of *Takama* became the ancestress of the two vassal tribes the *Dag Ṛali* and the *Ayt Lowayen*, and also of the *Kel Ahnet* which was originally united with the *Dag Ṛali*.

The tradition of the descent of noble Tuareg and vassals from *Tin-n-Hinan* and *Takama* as outlined above is admitted as true among most Ahaggar Tuareg, though the vassals claim that *Takama* was the younger sister of *Ti-n-Hinan* and not her servant-girl. And they claim that the superior position of the noble tribes is due to this fact, as any person must always pay respect towards elder brothers and sisters.

The tradition is told in a somewhat expanded edition by Foucauld:— After the immigration of *Ti-n-Hinan* and *Takama* their descendants who then constituted the tribes of *Kel Ṛela*, *Dag Ṛali*, and *Ayt Lowayen* lived in Ahaggar alone for a very long time. They were very few in number and had no camels. They subsisted mainly by goat-breeding and hunting. They never travelled outside Ahaggar, and had no knowledge of other places such as Tidikelt, Ayr, and Adṛaṛ of the Ifoṛas. It then happened that the two noble tribes *Kel-ahem-mellen* and *Téğehé Mellet* penetrated into Ahaggar. They conquered and burned down the agricultural settlement of Ennedid which was a centre of the *Dag Ṛali* tribe. The *Dag Ṛali* Tuareg then assembled at the village of Tahart to fight their invading enemies. They succeeded in killing most of the *Kel-ahem-mellen* and *Téğehé Mellet* Tuareg and took their camels. From then onwards the Ahaggar Tuareg became camel-breeders, began to travel outside of Ahaggar, and grew in number (cf. Foucauld 1951–52, II, p. 536).

Tradition B.II. A variation of the tradition about the origin of the Ahaggar Tuareg from *Ti-n-Hinan* and *Takama* has been recorded by Lehureaux as follows:— *Ti-n-Hinan* came from Tafilelt to Ahaggar riding on a white camel and accompanied by her faithful companion *Takama* and a certain number of slaves. From their homeland, the country of the *Beraber*, they had brought with them many loads of dates and millet. But the road to Ahaggar was a very long one, and the caravan became seriously threatened by hunger. However, one day *Takama* discovered a great many ant hills, and assisted by the slave women she collected all the seeds which the ants had stored. *Takama* gave these seeds to *Ti-n-Hinan* who remained sitting on her camel as she was of noble descent. By means of these seeds the caravan was able to arrive in Ahaggar. In order to commemorate this event the *Dag Ṛali* 173 and the *Kel Ahnet*, who descend from *Takama*, each year give a fixed tribute of seeds or dates to the 565 noble Tuareg who descend from *Ti-n-Hinan* (cf. Lehureaux 1929; Reygasse 1950, p. 88 ff.).

The stories about the origin of certain noble Tuareg from *Ti-n-Hinan* and the descent of the oldest vassal clans from *Takama* are traditions which seem to be created to justify the class-division and the supremacy of the noble Tuareg. The events narrated in the two variations of this tradition are contradictory. According to the tradition quoted by Foucauld, the noble Tuareg descending from *Ti-n-Hinan* had no camels when they arrived in Ahaggar, whereas that recorded by Lehureaux states that their ancestress came to Ahaggar riding on a camel. As to this I may say that all noble Tuareg I have questioned have claimed that they have always been camel owners.

The *Ti-n-Hinan* traditions bear the stamp of myth and they seem to have originated among the noble Tuareg. It is an interesting fact that the tombs near Abalessa, which according to the tradition 172 should contain the bodies of *Ti-n-Hinan* and *Takama*, at their excavation actually contained the skeletal 173 remains of two europid women. The so-called tomb of *Ti-n-Hinan* is in fact not so much a tomb as an enormous fort built of stone and containing several graves. The building is about 26×24 metres but of irregular shape. Its height is estimated to have been about 4 metres. In the interior of the building there are *tifinaṛ* inscriptions and engravings. Around the tomb of *Ti-n-Hinan* there are several small stone graves of the so-called "chouchet" type which contained skeletal remains of men, women, and children. About 200 metres from *Ti-n-Hinan*'s tomb there is a smaller tomb which appears to have been very simple and of the "chouchet" type. This according to tradition is the tomb of *Takama*. There seem to be little doubt that the monument as well as its surrounding tombs are pre-Islamic. It is also very likely that it has been erected by Berber-speaking peoples, and it was perhaps used as a station for caravans crossing the Sahara from the Mediterranean to the Sudan. The archaeological finds show a mixture of Roman artifacts from the 4th century A.D., and Sudanese articles. Reygasse, who has described the fort and its finds in detail, has also collected a tradition in Ahaggar according to which the fort was erected by a *rumi* named *Joluta* who lived in Ahaggar somewhat before the introduction of Islam (cf. Reygasse 1950, p. 88 ff.). Though the *Ti-n-Hinan* monument was probably erected by a Berber-speaking people who dominated Ahaggar, we cannot be so sure that its founders were the ancestors of the noble Tuareg. We must again bear in mind that the *Ti-n-Hinan* tradition 173 contains a strong mythical element, and that traditions and truth are often different things. To-day it is widely said in Ahaggar that *Ti-n-Hinan* is the ancestress of the noble Tuareg and the French. It 648 seems that this tradition derives from a French non-commissioned officer. The Frenchman related it to please the Tuareg and to create a bond between the Tuareg and the French. At all events we cannot accept the *Ti-n-Hinan* tradition as truth, and will now consider certain other traditions regarding the origin of the Ahaggar Tuareg.

Tradition C.I. This tradition is in circulation mainly among the vassals. It is as follows:— 173

The oldest inhabitants of Ahaggar were a people called *Isebeten* who are also mentioned in the B.I. 565 tradition. They were pagans who lived in a very primitive fashion. They had no proper tents and natural caves in the mountains were their normal habitations. They subsisted mainly by hunting barbary sheep and by goat-breeding, and used donkeys as beasts of burden. Foucauld mentions a

173 tradition according to which some of the *Isebeten* formerly engaged in agriculture in Ahaggar (Foucauld
565 1951-52, II, p. 535). The *Isebeten* spoke a Tuareg dialect different from that spoken to-day.
[172] Numerous prehistoric survivals draw attention to the mode of livelihood of the ancient *Isebeten*
people. A huge tomb at the foot of the Asekrem mountain is said to contain the remains of their
supreme chief, *Akkar*, and the Tuareg say that the large stone pestles (cf. Fig. 200) commonly found
in Ahaggar, were used by the *Isebeten*. The existence of the *Isebeten* in Ahaggar is a fact, besides,
two men known as *Mokhammed ag-Kerku* and *Émenni ag-Khedidda*, both members of the *Dag Ṛali*
tribe, are said to descend patrilineally from the *Isebeten*. Tuareg of the *Dag Ṛali* claim that their tribe
descends from the *Isebeten*, or is very closely related to it, so that the ancient population of *Isebeten*
formed the ancestral tribe of the oldest vassals *Dag Ṛali* (*Kel Ahnet*) and *Ayt Lowayen*. These *Isebeten*
were conquered by the ancestors of the noble Tuareg who came to Ahaggar at a later date and introduced
the camel.

It is striking that this tradition about the origin of the oldest Ahaggar vassals from the ancient
Isebeten contains no mythical elements, and I believe that it holds an element of truth, the more so
as it explains the origin of the class division in a quite natural way. Dr. Vycichl has tried to connect
the word *Isebeten* with the name of a Libyan tribe *I-s-b-t-u* mentioned in Egyptian accounts, according
to which the tribe was exterminated by Rameses III (cf. Lhote 1955a, p. 145). However, there is no
reason to speculate about the name in this way, as it can be explained more naturally without much
[551] difficulty. For the word *Ésebet* is very frequently used as a personal name of women in the *Dag Ṛali*
tribe so that it would seem natural to interpret the name *Isebeten* as "a group of people descending
from the woman *Ésebet*". If this interpretation is correct it would seem that the ancient *Isebeten* had
a system of matrilineal succession. Lhote has stated that certain hunting territories in the *Dag Ṛali*
[114] tribe are inherited in the paternal line by people who descend from the ancient *Isebeten* (Lhote 1955a,
[428] p. 144 f.) but this is not in agreement with my own investigations, which show that the two men said
to descend patrilineally from the *Isebeten* have no rights over hunting-territories.

174 The cultural features said to have been characteristic of the ancient *Isebeten* are to a large extent
614 conserved even nowadays in the *Dag Ṛali* tribe. These vassals, like other true vassals of Ahaggar, are
565 known by the name *Kel Ulli*, that is "the goat people", or by the name *Imṛad* which perhaps also
refers to goat-breeding for, according to Nicolas, the word is related to *ẹṛeyd* meaning "a kid" (Nicolas
[433] 1950a, p. 189). We can add that even to-day the subsistence activities of the true vassals centre mainly
around goat-breeding, with hunting and collecting as subsidiary occupations. Hunting is particularly
[224] important to the *Dag Ṛali*, descendants of the *Isebeten* and living within the same territory as did this
ancient people.

173 As to the arrival of the noble Tuareg, comprising the *Kel Ṛela* and the *Taytoḳ*, said to descend from
565 *Ti-n-Hinan*, there is some evidence that they did not constitute the oldest noble Tuareg settling in
Ahaggar. The tradition of their descent from *Ti-n-Hinan* claims that these noble Tuareg came from
Tidikelt in Morocco, that they descended from the *Beraber*, and that they were Islamic. The claim
that they were Islamic cannot be easily reconciled with the view that their ancestress was buried in the
large tomb or fort at Abalessa, for this huge building is beyound doubt pre-Islamic. I think it possible
that the tribes said to descend from *Ti-n-Hinan* were Isamic when they immigrated to Ahaggar.

My arguments in favour of the theory that the noble tribes now dominant in Ahaggar are not the 174
oldest noble Tuareg of that area are the following:— 565

(1) The small noble tribe *Ikadeyen*, which to-day comprises very few persons who live mainly as 571
sedentary agriculturists around the cultivation centre of Tit in Ahaggar, is said to have lived in Ahaggar 614
before the *Ti-n-Hinan* tribes. Some Tuareg say that the *Ikadeyen* are as old in Ahaggar as the *Isebeten*, and it is most interesting that the *Dag Ṛali* Tuareg, who descend from the *Isebeten*, pay at each marriage in their tribe a tribute corresponding to 50 kilos of millet or dates to the *Ikadeyen*. This custom is quite unusual and it may perhaps point towards an ancient vassal relationship between the *Dag Ṛali* (descending from the *Isebeten*) and the *Ikadeyen*. If this is so the vassalage has apparently been different from that prevailing in Ahaggar nowadays and more akin to that of the *Kel Ferwan* Tuareg in Ayr, where part of the bride-wealth is given to noble chiefs. It is interesting to note that the *Ikadeyen* Tuareg are said to be "only a little *Ihaggaren*", or to be "*Ihaggaren* but not true *Ihaggaren*".

(2) The word *Ihaggaren* (sing. *Ahaggar*) as a term for the social class here referred to as "noble 174
Tuareg", seems to be peculiar to the Northern Tuareg. In other Tuareg groups the so-called noble 565
class is known by the term *Imajeṛen* (sing. *Amajeṛ*), or related terms. Nicolas says that this term refers [184]
to such qualities as "vaillance" and "bravade" (Nicolas 1950a, p. 188 f.). The corresponding word in Northern Tuareg dialect is *Imuhaṛ* (sing. *Amahaṛ*), which is used for all true Tuareg including the vassals. It has generally been accepted that this word derived from the verb *aheṛ* meaning "to raid" or "to plunder" (Duveyrier 1864, p. 318; Foucauld 1951–52, II, p. 665–674), but Prasse has recently informed me that it is a deformation of *amaziṛ* known in Northern Berber as "free man; Berber". The Foucauld hypothesis that it should be a verbal adjective of *aheṛ* must be discarded, the *h* of this verb being original (Prasse, verbal information) (cf. also Rodd 1926a, p. 457–462).

The word *Ihaggaren* (sing. *Ahaggar*) is different. According to the Tuareg it is just a name, and it is very possible that Foucauld is right in claiming that it is identical with the word *Hawwara*, which was the name of an ancient Berber-speaking population of North Africa (Foucauld 1951–52, II, p. 533 f.). Nicolas has stated as his opinion that this theory is pure speculation (Nicolas 1953b, p. 14). This, however, is not correct, as the relationship between the words can be explained on linguistic grounds, as claimed by Foucauld. For the letter *w* when redoubled will as a rule change into *gg*, and *w* very frequently permutes with *g* (Foucauld 1951–52, II, p. 533).

If we can consider *Hawwara* and *Ihaggaren* as identical words and thus assume a relationship 174
between the dominant noble Tuareg of Ahaggar and the ancient Berber-speaking people known as 175
Hawwara, we must look for further information about the latter people who are frequently mentioned 565
in Arab historical documents of the Middle Ages. Ibn Khaldun in particular has written about the *Hawwara*, who are described as nomads and sedentary people who live mainly in the regions of Tunisia, Tripolitania, and Cyrenaica, though tribes belonging to the *Hawwara* groups are also found outside this area to the east and west. The *Hawwara*, according to Ibn Khaldun, came under Arab influence at a very early date, and were conquered by the Arabs as early as the 9th century A.D. In Ibn Khaldun's days the *Hawwara* people were entirely dominated by the Arabs and were the vassals of Arabs of the *Beni Sulaym* group. They spoke Arabic and were culturally indistinguishable from the Arabs. But according to Ibn Khaldun some of the pastoral *Hawwara* at very early date migrated

174 175 565 southwards to settle close to the *Lemta* Tuareg. The *Hawwara* descent of these people is indicated by their name *Heggar*. For the letter *w* in the name *Hawwara* has changed into a sort of *k* with a pronunciation something between a soft and a guttural *k* (cf. Ibn Khaldun I, p. 275 ff.). Thus we see that the theory set forth by Foucauld about the connection between the *Hawwara* and the *Ihaggaren* (sing. *Ahaggar*) was advanced much earlier by Ibn Khaldun.

It is interesting to note that though he recognizes a certain relationship between the *Hawwara* and the large Tuareg groups Ibn Khaldun does not as a rule mention the *Hawwara* as belonging to the veiled Tuareg. There are many different and contradicting genealogical views of the origin of the *Hawwara*. It seems as if Ibn Khaldun accepts the explanation given by Ibn Hazm: All Tuareg groups and the *Hawwara* descend from an ancestress named *Tizki*. But the *Hawwara* are not patrilineally related to these large Tuareg groups; they descend from *Hawwar* and through him from an ancestor named *Awriṛ* (cf. Ibn Khaldoun I, p. 169). It is remarkable that the word *Awriṛ*, which in the form of *Awriṛa* is also used by Ibn Khaldun as a name of a Berber tribe in the Fezzan, is identical with *Uraṛen* – the name of the principal noble tribe among the *Kel Ajjer* (cf. Foucauld 1951–52, II, p. 533).

Of the other Tuareg groups Ibn Khaldun says that they have lived in the desert since immemorial times. The principal groups mentioned are:—

Gedala belonging to the large *Ṣanhaja* division. They lived in the desert south of the Arab tribe *Dwi-Ḥasan* of *Makil* root living around Sous in Southern Morocco.

Lemtuna and *Wenziga* in the desert south of the Arab tribes *Dwi-Manṣur* and *Dwi-Ubayd-Allah* – tribes of *Makil* root living in Morocco.

Mesnufa in the desert south of an Arab tribe named *Zoṛba* living in the central Maghreb.

Lemta living in the desert south of the Arab tribe *Riaḥ* in Eastern Algeria (Zab, Bougie, Constantine).

Targa living in the desert south of the Arab tribe *Sulaym* in Ifrikia, that is Tunisia and adjacent parts of Tripolitania (cf. Ibn Khaldun II, p. 104 f.).

The country of the Northern Tuareg in Ibn Khaldun's days was inhabited by two main groups of Tuareg known as *Lemta* and *Targa*. This is confirmed by Leo Africanus who, however, states that the *Targa* live west of *Lemta* as opposed to Ibn Khaldun, who says that the *Lemta* formed the westermost group. The two groups, according to Leo, also occupy the country south of the present territory of Northern Tuareg so that Ayr belonged to the *Targa* group (cf. Leo Africanus p. 797 ff.) (cf. also Rodd 1926a, p. 330 ff.). As to the *Hawwara* Berbers, they are mentioned by Leo in the original Italian edition as *Aoara*, in the English translation as *Haoari* or *Hacari*. They are not mentioned as forming part of the People of the Veil, but as tent-dwelling pastoral Moors living in the northern desert and speaking Arabic though corruptly (Leo Africanus p. 130 ff., note (14) p. 205 f.).

It is most interesting that the words *Targa* and *Lemta*, which have now disappeared as names of Tuareg groups, are mentioned not only by Arab authors but are also found on European Maps of North Africa from the 16th and the 17th centuries. We have the word *Targa* situated in the central or southern part of the Sahara on the *Africae Tabula Nova* of Ortelius (1570). We have the word *Targa* in the Northern Sahara and the word *Lempta* towards the south-east of it in the Central Sahara on the *Africae Nova Descriptio* of Blaeu (1665) (cf. Bovill 1958, maps III & IV p. 113 & 132), and we have both names occurring on a map produced by Dapper in the same century (cf. Dapper 1670, p. 1).

We mentioned in the introductory chapter that the word "*Tuareg*" seems to be derived from the 174
word "*Targa*" or *Targa*", which latter word nowadays is used for the desert country also known by 175
the Arab word, the "Fezzan". Foucauld says that the word "*Tuareg*" to the Arabs of Tidikelt has 565
two distinct meanings, namely (1) "noble Tuareg", and (2) "Tuareg of all classes". He also says that the Berber-speaking population of Tawat and Tidikelt use the word *Ilemtiyen* synonymously with the word "Tuareg" used by the Arabs of the same area, and that the name *Ilemtéyen* is used for a small tribe of Tuareg living in the *Kel Ajjer* territory (cf. Foucauld 1951–52, II, p. 533 f.). It is noteworthy that the *Ilemtéyen* tribe, which is not very numerous nowadays when its members live as sedentary agriculturists near Ṛat, is noble by descent, and I was told by the *Amenukal Bay* in Ahaggar that the *Ilemtéyen* tribe is not related to the *Ti-n-Hinan* tribes but descends from an ancestor named *Lemta*.

In other words the following theory on the origin of the class division and the political systems among the Northern Tuareg might perhaps be justified:— We accept the tradition that the class-division originated as a result of an invasion of Berber-speaking camel-breeders, that these people introduced the camel into the Sahara, and became the first noble Tuareg in the North. These first noble Tuareg of Ahaggar and Tassilé-n-Ajjer belonged to the group *Lemta*. The noble Tuareg who to-day form the dominant noble tribes in the north came later; they descend from the *Hawwara* Berbers, who very early came under Arab and Islamic influence and took up grazing grounds in the country of the Northern Tuareg at a later date which cannot be fixed precisely.

TUAREG INVASIONS INTO AYR

The connection between the Mediterranean and the Sudan by means of caravans through the Sahara 174
is of very great, but unknown, age. Caravans have crossed the Sahara as far back as history reaches (cf. Bates 1914, p. 101 ff.; Bovill 1958, p. 24). At the beginning donkeys and oxen were probably used as beasts of burden, and the latter animals were employed also as draught animals for carriages, as were horses at a later date (cf. Lhote 1953a, p. 1138–1228). With the introduction of the camel, caravan trading through the desert was no doubt highly intensified. For although donkeys and also oxen can cross the Sahara in winter without much difficulty, camels are better suited to desert journeys.

The first Tuareg who came to Ayr may perhaps have been caravan traders attracted by the excellent gracing grounds of this country. When they arrived we do not know, but it seems possible to follow in broad outline the history of the Ayr Tuareg a thousand years back in time, and to distinguish between several invasions. However, it must be admitted that the invasions cannot be precisely dated and that our historical knowledge is on the whole most fragmentary. It is derived partly from oral 174
tradition, partly from written historical sources, among which the so-called *Agadez Chronicle* is of 175
particular value. It consists of various Arabic manuscripts in the care of the Sultan of Agadez. They have been published in translation and abstracts (Palmer 1910, 1928, 1936; Urvoy 1934). Several authors have made valuable contributions to the history of the Ayr Tuareg (Barth 1857–58, I; Rodd 1926a, 1926b, 1938; Palmer 1936; Urvoy 1936; Nicolas 1950a, 1950b). But there have been an excessive tendency to speculation upon the basis of superficial resemblances between tribal words.

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175 To my mind, the best general account of the history of the Ayr Tuareg, is given by Urvoy whom I follow in outline.

We do not know when the first Tuareg came to the Sahara, but as early as the 7th century A.D. extensive migrations of pastoral Berbers, including the two important tribal groups of *Lemta* and *Zaṛawa*, passed through the desert. The *Lemta* settled around the Niger and gave rise to the *Sonṛay* Empire, while the *Zaṛawa* reached the Lake Tchad country where the state of Kanem-Bornu was created. At this time pastoral Berbers also arrived in Ayr where new states were created. The name of one of them is known, namely the *Hausa* state of *Gober* or *Gobir* which existed in Ayr up to the 12th century A.D.

New invasions took place in the following centuries. The ancestors of the tribes of *Igdalen* (now in Tegama and Damergu south of the Massif) and *Iberkhuréyn* (now in Azawaṛ north of Tawa) have probably immigrated before the year 1000 A.D. as may also be the case with the *Kel Tamgak* in Northern Ayr. The great age of the *Igdalen* and the *Kel Tamgak* is recognized by all Ayr Tuareg to-day.

The arrival in North Africa of the Arab bedouins known as *Beni Hilal* and *Beni Sulaym*, who invaded the Tuareg countries of Tripolitania and the Fezzan (cf. Ibn Khaldun, I, p. 134 ff.), had the result that many Tuareg tribes migrated southwards to Ayr. Among them was a group of seven tribes (*Itésen*, *Ijadaranein* [probably the *Ihaḍanaren*], *Ifadalen*, *Tamakwat*, *Tamga'azellet*, *Iza'aran*, and *Ibrazwen*) descending from daughters of one and the same mother. The *Itésen* tribe had as its particular ancestress the eldest daughter. The tribes were united into a sort of federation also known as *Itésen* because its supreme chief, named *Aṛumbulu*, was elected from this tribe. The *Itésen* group settled in Central Ayr, where for a long time it held an extremely powerful position. At a certain date a group named *Immikitan* was separated from the *Itésen* federation to form an independent or semi-independent political unit with its own chief named *Emekki*. Tuareg of *Itésen* and *Immikitan* stocks are nowadays very few in number and mainly live in the savannah south of the Massif, where most of them took refuge owing to wars with later immigrants. However, remnants of these ancient Tuareg tribes are still found in the central parts of the Ayr Massif where they lead a semi-sedentary life. It seems as if the *Itésen* and the *Immikitan* at a very early date became attached to the small agricultural centres of Ayr. Many stone ruins throughout Ayr are ascribed to the *Itésen*, who are said also to have lived at Agadez which originally was a small village of stone houses inhabited by them.

According to tradition the *Itésen* Tuareg came from the oasis of Awjila in Libya, and we may assume that they have immigrated from Tasilé-n-Ajjer, the Fezzan, or adjacent parts of northern desert. The group of Tuareg known as the *Kel Geres* are, according to some traditions, related to the *Itésen*. They are said also to have come from Awjila. However, it seems as if the *Itésen* and the *Kel Geres* have immigrated to Ayr at different times, and that the *Kel Geres* came later. According to Urvoy they invaded Ayr at a time between the 12th and the 14th century (cf. Urvoy 1936).

At the end of the 14th century both the *Kel Geres* and the *Itésen* came under the pressure of Tuareg invaders known as the *Kel Ewey*, who are said to have had Awjila as their original homeland like the *Itésen* and the *Kel Geres*. They fought these two groups and in particular the *Kel Geres* who lived in Central Ayr around Anu Meḳḳeren. As a result of this the *Kel Geres* finally left Ayr in the 18th century to take up grazing grounds in the region of Madawa of the Nigerian borderlands. They still live in these regions and are now extremely rich in stock, though they are said to have had very few domestic 174 animals when they left Ayr for the southlands in the 18th century.

175 The *Kel Ewey* Tuareg who probably came to Ayr in the 14th century took up grazing grounds in Central and Eastern Ayr. There were originally seven tribes of *Kel Ewey* Tuareg, and five of these still exist. Like the *Itesen* and most other Tuareg, these tribes claim descent from a common ancestress. But the *Kel Ewey* Tuareg have largely mixed with the negroid village population which is also now known as *Kel Ewey*, and there are very few fair-skinned pastoralists among them nowadays. Barth mentions that the true *Kel Ewey* tribes are related to the very powerful tribe of *Uraṛen* of Tasilé-n-Ajjer (Barth 1857–58, I, p. 372).

As to the origin of the noble nuclei of the two important drum-groups of *Kel Ferwan* and *Kel Faday*, the date of their arrival is most difficult to determine. The name of the *Kel Ferwan* is derived from the [103] village of Iferwan in the north (*Kel Ferwan* = "the people of Iferwan") but they were nevertheless true nomads who originally lived in Northern Ayr. Urvoy thinks that they came to Ayr at the same time as the *Kel Ewey* or somewhat later, and that they lived in Northern Ayr around Iferwan until the 17th century when they moved southwards to the region of Agadez. But this statement is not in agreement with traditions I have collected in Ayr. It is perhaps not to be taken very seriously that all *Kel Ferwan* Tuareg claim that they came to Ayr before other Tuareg groups, but the present Sultan *Umar* of Agadez says that all Tuareg groups now living in Ayr had arrived in the country when the sultanry was established in the year 1405 A.D., at which time the noble *Kel Ferwan* Tuareg lived at Tafadek north of Agadez. There are different traditions about the origin of the noble *Kel Ferwan* Tuareg. One mentioned by Urvoy claims Egypt as their homeland; this probably implies immigration from or via the Fezzan (Urvoy 1936, p. 150). Barth says they are related to the *Uraṛen* (Barth 1857–58, I, p. 385). According to my own investigations they came from a country situated towards the east or northeast, or from Awjila, but there are also many Tuareg of this group who claim that the noble *Kel Ferwan* Tuareg originally lived in Ahaggar as close kinsmen to the dominating *Kel Ṛela* tribe of that region. Some *Kel Ferwan* Tuareg will even go so far as to hold that even after their arrival in Ayr they continued to intermarry with the *Kel Ṛela* of Ahaggar. According to Nicolas their ancestress is named *Tadawelt* (Nicolas 1950b, p. 474), while I have been told her name was *Sabenas*.

As to the origin of the *Kel Faday*, their name is derived from a mountainous part of Northern Ayr. According to Urvoy they migrated southwards towards the south-west to the region of Ingal, where they took up grazing grounds at the end of the 18th century (Urvoy 1936, p. 150). The *Kel Faday* Tuareg are said to be related to the *Taytoḳ* of Ahaggar (Duveyrier 1864, p. 322; Urvoy 1936, p. 150; Nicolas 1950b, p. 472). Barth however is of the opinion that they came from different regions but in particular from Tasilé-n-Ajjer (Barth 1857–58, I, p. 384).

Among the latest Tuareg immigrants are to be mentioned the *Kel Tamat* who came possibly three or four centuries ago. Urvoy mentions Ahaggar as their homeland (Urvoy 1936, p. 150), while Nicolas says they are related to the *Uraṛen* of Tasilé-n-Ajjer (Nicolas 1950b, p. 471). Even later came the *Ikezkezen* Tuareg who in Ayr attached themselves to the *Kel Tamat*. According to Urvoy they came from Ahaggar (Urvoy 1936, p. 151), according to Nicolas they descend partly from the *Taytoḳ* of Ahaggar, partly from the *Imanṛasaten* and the *Uraṛen* of Tasilé-n-Ajjer (Nicolas 1950b, p. 472). Tuareg of the *Ikezkezen* told me that they are related to the *Uraṛen*.

173 Tuareg traditions of origins must always be regarded with some suspicion. It is well known that all over Northern Africa numerous Arabs and Berbers claim relationship with the Prophet and his family. Most of these traditions seem to be mere fakes, and they have been omitted in this brief account of Tuareg history in Ayr. This does not mean, of course, that we can rely on the above traditions which are very often contradictory. An obvious case is that of the *Kel Ferwan*. There are traditions giving Awjila as their homeland, and I have very frequently been told that they came from Ahaggar as close kinsmen of the *Kel Ṛela*. I do not think this latter tradition contains much historical truth though it may reflect political relations of the past. The *Kel Ferwan* apparently were on quite good terms with the *Kel Ṛela* of Ahaggar whom they admired because of their power. The *Kel Ṛela* had many quarrels with the *Taytoḳ* and also with the *Kel Faday*, and the latter Tuareg again were enemies of the *Kel Ferwan*. As the *Kel Faday*, perhaps for political reasons, claimed themselves related to the *Taytoḳ* it may have been quite natural for the *Kel Ferwan* (the most important tribe in Ayr) to claim relationship to the *Kel Ṛela* (the most important tribe of Ahaggar).

It is often said in Ayr that the dominant noble tribes of most Tuareg groups are related to one another through daughters of the same mother. The Sultan says that there were originally six sisters who became the ancestress of the following noble Tuareg:— The *Kel Ferwan*, the *Kel Faday*, the *Kel Geres*, the *Itésen*, the *Kel Ṛela*, and the *Imanṛasaten*. The *Iwllemmeden* Tuareg, on the other hand, have no relationship to these Tuareg but according to the Sultan are "children of the *Kel Asuf* spirits". The story of the descent of the important noble Tuareg of Ayr from a certain number of sisters is told in variations within the different tribes and groups. People of the *Kel Ferwan* group exclude the *Kel Faday* and claim that once in the past the noble *Kel Faday* tribe was a vassal tribe of the *Kel Ferwan* drum-chief, and people of the vassal tribes *Kel Akerra*, *Imezzureg*, *Isakaranan*, and *Kel Tédalé*, the members of which claim noble descent, hold that they descend from a daughter of the ancestress of the important noble Tuareg tribes.

We can never rely on oral traditions of origin which have important political functions, but oral traditions may contain some historical verity. Most traditions mentioned point to a north-eastern origin of the Ayr Tuareg – to Tasilé-n-Ajjer, the Fezzan, and to the oasis of Awjila. It is also interesting that there are more general traditions, according to which all Ayr Tuareg ultimately came from a country named *Elbarbar* situated towards the east. In support of these traditions we can refer to the fact that the most important northern trade road from Ayr leads to the oasis of Ṛat, to Tripolitania, and the Fezzan. In the past the important caravan road between Timbuktu and Cairo went over Gao, Agadez, Ṛat, Murzuk, Awjila, and Siwa.

THE SULTANRY OF AYR

175 643 *The Agadez Chronicle* referred to above gives an interesting description of the establishment of the Ayr Sultanry in 1405 A.D. Before that time, it is said, a growing anarchy reigned all over the country, and the *Aṛumbulu*, supreme chief of the *Itésen* federation, therefore took the initiative in electing a Sultan to act as an arbitrator among the various groups of Tuareg.

According to the *Agadez Chronicle* five tribes of the *Itésen* went out to discover a Sultan. They found 175
him in a country written in translations *Arim Sotafan* (Palmer 1936, p. 55) or *A'arem-Cattafane* 643
(Urvoy 1934, p. 154). The meaning of this word – correctly written *Aγrem Settefen* – is "black town". This seems to indicate that the first Sultan came from a Sudanese state, and it is stated by all Tuareg that all known Sultans of Agadez have been black-skinned. Even to-day it is claimed that although the Sultan can take a fair-skinned Tuareg woman as one of his wives, the descendants of such a marriage are never elected Sultans. Individuals who have ties of kinship with a particular Tuareg group are never chosen for that office.

The fact that the Sultan of Agadez has four ministers like most kings of Sudanese states (cf. Fro- [645]
benius, Atlas Africanus, H.3; Baumann 1940, p. 58) may perhaps point to a connection between the establishment of the Ayr Sultanry and the Sudan, and this seems also to be intimated in the *Agadez Chronicle*. Nevertheless, the popular tradition about the origin of the Ayr Sultanry goes against this 173
assumption. For it is told all over Ayr, both among Tuareg and the so-called *Imeggedezen*, that the 643
first Sultan of Agadez came from Constantinople. This tradition, which is not mentioned in the *Agadez Chronicle*, is also claimed to be true by the present Sultan of Agadez. He says that the *Itésen* tribes, or representatives from these tribes, went to Constantinople to ask the Sultan to give them one of his sons as the first Sultan over Ayr. The Sultan of Constantinople had three fair-skinned wives who all refused to let their sons go to Ayr with the deputation. But he also had four black-skinned wives or concubines and the first of them who was asked to let her son become the Sultan over Ayr agreed. So it happened that the deputation of *Itésen* Tuareg returned to Agadez with their first Sultan who patrilineally is descended from the Sultan of Constantinople, matrilineally from a slave woman. There are some people who claim this tradition to be spurious, but it is admitted by most people as a true account of the origin of the Ayr Sultanry. Among the *Kel Ferwan* Tuareg it is claimed that the Sultan was fetched by people of the *Kel Ferwan* group, or that the *Itésen* deputation was sent out to fetch the Sultan on the initiative of the *Kel Ferwan* group. This variation of the tradition is also recognized by the present Sultan.

In the *Agadez Chronicle* we are told that the Sultan at first had no permanent residence but led a 175
nomadic life in the region of Tadeliza. It did not take long before he became permanently settled at 643
Ti-n-Chaman from where he moved to Agadez which seem to have been founded as a city at the [203]
middle of the 15th century A.D., a centre of the then extremely flourishing trade through Ayr (cf. Rodd 1926a, p. 102, 364 f., 409; Urvoy 1936, p. 164).

The present Sultan *Umar*, who has reigned since 1919, says that the first Sultan who came to Ayr had 173
the great task to learn the Ayr Tuareg good manners of living. Before the establishment of the Sultanry 643
the whole country of Ayr had been dominated by the *Izγan* (of the Lake Tchad region) who had claimed as their annual tribute a young girl from all Tuareg tribes of Ayr. When the first Sultan arrived the Tuareg lived like donkeys in the rocks. They had extremely bad manners, and there were even people who married with their sisters. The Sultan taught them good manners and brought justice and order to the country. He was the true owner of the land from the northern outskirts of Ayr to the region of Madawa where the *Kel Geres* Tuareg now live. He divided the land between the main groups of Tuareg, and allotted to the *Kel Ferwan* Tuareg who lived around Tafadek a large part of Ayr up to

173 Talak. This tradition is acknowledged as true by certain Tuareg of Ayr, but all *Kel Ferwan* Tuareg
643 claim that the Sultan has never had any right over the country of Ayr. They state that his Tuareg
[634] title of *Amenukal* has nothing to do with *akal* (i.e. "the land"), and that the country of Ayr from the
remote past until now has been owned by the drum-chief of the *Kel Ferwan* group (cf. p. 421). However,
175 if we turn to the information given on this subject by the *Agadez Chronicle*, we learn that until the
643 establishment of the Sultanry it had been customary for the powerful noble tribes to claim a tax of
651 horses from the caravans which passed their particular territories. The first Sultan of Ayr sent a letter to learned people of an Islamic country to ask whether such taxes were lawful or unlawful. And he was answered that these taxes were to be considered good because those who received the taxes protected the very important caravan road between Timbuktu and Cairo. The taxes should therefore be collected by the Sultan who again should give them to the Tuareg (Urvoy 1934, p. 155). Before the arrival of the French the Sultan had the right to dues from goods passing through Agadez, which is mentioned already by Leo (Leo Africanus III, 828 f.), and he was entitled to dues from the Bilma salt trade and to annual taxes from the sedentary Negroes of Ingal and Tegidda-n-tesemt.

643 The tradition which says that the Sultan descend patrilineally from the Sultan of Constantinople and matrilineally from a slave woman clearly indicates the position of the Sultan in Tuareg society. The Sultan is looked down upon by fair-skinned Tuareg because of his black skin, but he is also endowed with prestige because of his supposed descendance from the Sultan of Constantinople.

643 A certain *elbaraka* or benediction is ascribed to him, and all people who want to greet the Sultan
778 must remove their sandals. The Sultan is always buried in his palace at Agadez, and it is said that
[766] if he was buried outside there would be a great risk that his subjects would dig up his skeleton to use
part of it for amulets. It is also said that the Sultan preserves a part of the skeleton of his predecessor
[765] for amulets. This must be viewed in connection with the particular power of *elbaraka* attached to the Sultan, and it is important to note that the Sultan is believed to possess an unusual power of fertility, which is secured and maintained until his death by means of certain medicines acquired from the Sudan. Thus it seems as though the Sultan possesses some of the qualities of the Sudanese divine
175 kings, but in practice he has little power. The *Agadez Chronicle* refers to Sultans who acted as war
643 leaders of all Ayr Tuareg against foreign Tuareg groups or the forces of Sudanese states, but within Ayr it was difficult for a Sultan to maintain his power over certain warlike groups of pastoral Tuareg. Leo Africanus writes that the inhabitants of the desert depose and elect Sultans whenever they like (Leo Africanus III, p. 828), and so it has been right up to modern times. Many Sultans have only reigned for very short periods.

631 Although the Sultan is the supreme chief of all Ayr Tuareg, he does not have the same relationship
634 to all Tuareg groups, for many of them are placed directly under the supreme chief of the *Kel Ewey*
648 group known as the *Anestafidet*. The *Anestafidet* originally lived at Asodey in Central Ayr, but he now lives in Agadez where he holds a prominent position as a chief. Like most *Kel Ewey* he is black-skinned and related to the Hausa population of the Southlands, where he lives for a part of the year with the important task of organizing the trade between Ayr and the south. The *Anestafidet* has always been closely attached to the sedentary Hausa of the Southlands, and is said to have part of his family living at a small village named Blanko between Tanut and Zinder. A new *Anestafidet* may even be elected

from the members of this village. The particular connection between the *Anestafidet* and the sedentary 631 peoples of the Sudan is very natural in view of the fact that the *Kel Ewey* Tuareg nowadays, as in the 634 past, engage much in caravan trading with the south. The name of *Anestafidet* is derived from the 648 tribe *Kel Tafidet* – one of the noble *Kel Ewey* tribes which immigrated to Ayr about the 14th century A.D. The *Anestafidet* has always been a very important chief, and the *Kel Ewey* Tuareg, though very mixed with the ancient sedentary population of Ayr Negroes, were for periods in the past very important politically. To-day the *Anestafidet* is the most important chief of Ayr after the Sultan, and 266 it is said that, like a deceased Sultan, a deceased *Anestafidet* should be buried in his house. The *Anestafidet* 533 is treated with respect by all Ayr Tuareg, who take off their sandals when greeting him, and at the beginning of the holy Friday (that is on Thursday night) the professional musicians of Agadez, when they have made music at the Sultan's palace, go to *Anestafidet*'s residence and then to the ministers of the Sultan.

The *Kel Ewey* Tuareg, who live predominantly in and around the villages of the eastern and most mountainous part of the Ayr Massif, form the majority of the people placed directly under the command of the *Anestafidet*. According to figures given by Nicolas for tribes and villages of the *Kel Ewey* 162 their total number seems now to be about 8000 (cf. Nicolas 1950b, p. 465 ff.). But placed under the *Anestafidet* are also the pastoral Tuareg group known as *Kel Tamat*. Formerly it had its own drum-chief (*ettebel*) who was also the supreme chief of the *Ikezkezen* Tuareg. The group of *Kel Tamat*, 162 with the *Ikezkezen*, judged by the figures for some of the tribes (cf. Nicolas 1950b, p. 471 f.), comprise nowadays about 4000 individuals most of whom originally lived west of the true *Kel Ewey*.

The *Kel Tamat* do not form a drum-group nowadays. In the past their drum-chief was elected by tribes within the drum-group, but he had to be installed ceremoniously by the *Anestafidet* who presented him with a large headcloth. All people of the *Anestafidet* have to recognize him as their supreme judicial authority. But the *Anestafidet*, who is elected by people of the ancient noble *Kel Ewey* tribes, is submitted to the authority of the Sultan who also installs the *Anestafidet* ceremoniously.

Most Ayr Tuareg who are not placed under the *Anestafidet* are collectively referred to as the *Kel* 631 *Amenukal*, that is "the people of the *Amenukal* (or Sultan)". Most of these people are pastoralists 634 though some sedentary or semi-sedentary people are also placed in the Sultan's group. The important 643 Tuareg groups placed directly under the Sultan are the following:—

The *Itésen* with the *Immikitan* most of whom left the Massif long before the arrival of the French. In the past both groups formed politically very important drum-groups, and though they were very few in number throughout the 19th century they were nevertheless politically important, as without them a Sultan could not be elected and installed.

The *Kel Faday* in the region of Ingal consist of a noble tribe and eleven tribes of vassals. The *Kel Faday* constituted throughout the 19th century a politically important drum-group though it was very small. Their total number according to Nicolas is now 2341 (Nicolas 1950b, p. 474).

The *Kel Ferwan* comprise tribes in the western parts of the Massif including the regions of Agadez, 162 and also south of the Massif in Dumergu. They number about 5000.

The *Kel Geres* Tuareg live in the Southlands around Madawa most of the year but visit Southern 631 Ayr west of Agadez in the rainy season (cf. p. 7, 431 f.). Properly speaking they are not now recognized 643

631 as Ayr Tuareg and are politically independent. Nevertheless they still consider the Sultan of Agadez 643 as their proper *Amenukal*. They are very rich and numerous, comprising a great many tribes. Their [184] political system differs from that of most other Tuareg. I outline its structure later in this chapter.

634 The drum-chiefs of the *Itésen*, the *Immikitan*, the *Kel Faday*, and the *Kel Ferwan* have to be rec- 643 ognized and ceremoniously installed by the Sultan. The ceremony should traditionally take place at the Sultan's palace of Agadez, but to-day it is performed at the French Administration Centre. The main feature of the ceremony is the wrapping of a large head-cloth around the elected chief's head by the Sultan. The Sultan, on the other hand, is elected and installed by the chiefs of above-mentioned groups and by the *Anestafidet* as the representative of the *Kel Ewey*. But the chiefs do not take the same part in the election of a Sultan, and it is noteworthy that the *Kel Faday* and the *Kel Ferwan*, who throughout the 19th century were extremely powerful and warlike, apparently do not play any rôle in the instalment ceremony.

The instalment ceremony is described by Barth as follows:— From his private room in the palace (Fig. 288) the Sultan is led to the public hall. Here the chiefs of the *Itésen* and the *Kel Geres* ask him to sit down upon a bed made of ribs of palm leaves covered with mats, but he is not allowed to lift his feet and sit in Oriental fashion until permission is given by the *Kel Ewey* (Barth 1857, I, p. 461 f.). Jean, who gives a more detailed account, says that the *Kel Geres* do not participate, and have no voice in the election (Jean 1909, p. 159 ff.). I have myself been told during my visit to the *Kel Geres* drum-chief that the *Kel Geres*, represented by their drum-chief, previously took part in the election of the Sultan. As to the position of the powerful drum-groups of *Kel Faday* and *Kel Ferwan*, people of the latter group frequently claim that they alone could elect a Sultan, and I have been told by *Kel Ferwan* Tuareg that a Sultan should be installed in the way that the supreme chiefs of the *Itésen* and the *Immikitan* take the Sultan by his hands and lead him to a sheepskin where he sits down to receive the large head-cloth from the drum-chief of the *Kel Ferwan* group. However, it seems as if the *Kel Ferwan* drum-chief does not traditionally play any part in the instalment ceremony.

631 In the 19th century the Sultan was the arbitrator and the supreme judge in disagreements between 634 the different Tuareg groups whose supreme chiefs should be installed by the Sultan. But he could 643 not meddle in their internal affairs, and rarely was so influential that he could stop the frequent quarrels. The *Kel Faday* and the *Kel Ferwan* drum-chiefs did not always pay much respect to the Sultan. At the time of the French occupation of Ayr the *Kel Faday* even had the impertinence to collect the Sultan's dues from the village of Ingal (Jean 1909, p. 162), and Barth mentions that the Sultan was much afraid that the *Kel Faday* would detach themselves from him to make an alliance with the *Iwllemmeden* (Barth 1857-58, I, p. 478). As to the *Kel Ferwan*, their chief was the most prominent leader of all Ayr. This is clearly documented by Jean (Jean 1909, p. 103 f.) and it is repeated over and over again by all Tuareg of Ayr to-day. Barth states that the Sultan when away from Agadez on journeys was replaced by the *Kel Ferwan* drum-chief, and he thinks that the *Kel Ferwan* originally formed the noble family from which the Sultan or *Amenukal* was chosen (Barth 1857, I, p. 385). This [123] agrees with information I have gathered among the noble Tuareg of the *Kel Ferwan* group. It is however most difficult to judge the value of these traditions as it is difficult to reconstruct political life in pre-European times. All Tuareg try to glorify their own political rôle in the past, and this is particularly true of the noble Kel Ferwan Tuareg.

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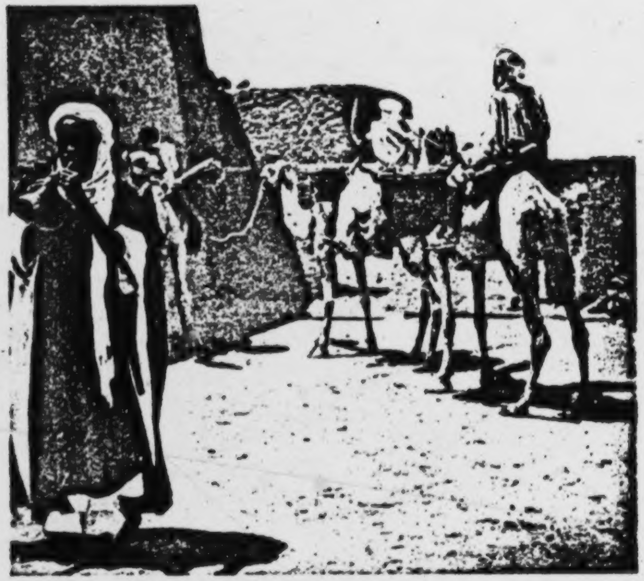

Fig. 287. Musicians of the Sultan of Ayr marching through Agadez. In the front a man blowing a clarinet-like instrument, in the background the drummers mounted on camels and beating two drums each. The drums of the Sultan are different from that of the *Kel Ferwan* drum-chief. They are larger and deeper, have their skin fastened in a different manner, and are beaten with sticks.

631 true of the noble *Kel Ferwan* Tuareg. They are nowadays without much power and prestige, whereas
634 the Sultan, owing to the French, has augmented his power greatly. Many *Kel Ferwan* Tuareg speak
643 disparagingly about the Sultan, and the drum-chief of the *Kel Ferwan* named *Agg-Elkhir* called him
[178] openly a slave and did not take off his sandals in the Sultan's presence.

643 There can be little doubt that the man who was elected the Sultan of all Ayr people at the beginning
642 of the 15th century very quickly became a Sultan not of Ayr, but of Agadez. A state organization like that of the Ayr Sultanry could not function in a Tuareg society characterized by warlike pastoral groups, and the Sultan would have to be dismissed or else recognize the authority of the strongest pastoral group which, as we have seen, throughout the 19th century was the *Kel Ferwan* drum-group.

THE KEL FERWAN DRUM-GROUP

634 Lists of tribes which belong to the *Kel Ferwan* drum-group have already been published. Jean has
614 fourteen in his list (Jean 1909, p. 104), Rodd and Abadie have fifteen (Rodd 1926a, p. 427 f.; Abadie
[114] 1927, p. 391 f.), while Nicolas puts twenty-two tribes in the group (Nicolas 1950b, p. 474 f., 480).
My own list comes close to that of Nicolas, but contains a few additional names. I have divided my
list in two parts, as there were within the *Kel Ferwan* drum-group two important noble tribes each
with a group of particular vassals. The traditional grazing grounds of the important tribes in the past
are also indicated. I have not been able to get precise particulars about the size of tribes, and therefore
[162] quote the figures given by Nicolas (Nicolas 1950b, p. 474 f.). The tribes differ greatly in size, ranging
from 653 to 42 individuals. The average figure for a tribe is about 250.

178 The traditional political structure of the *Kel Ferwan* drum-group has almost completely disappeared,
634 and it seems as if the ancient rules were in decay shortly after the French occupation of Ayr when
648 the Sultan became strongly supported by the administration. Since the rebellion against the French
in 1917, political life has become completely altered and the traditional political structure has had to
121 be reconstructed. I have tried to make a reconstruction of this nature by my investigations in Ayr,
634 where I had a number of old men as informants on this particular subject. My investigations were
115 most difficult because many Tuareg would often ascribe their tribe, their class, and their drum- group
a far higher political importance than it seemed to have had. However, I found a few old vassals who
seemed to be able to tell about the past without much prejudice, and I believe that I obtained a fairly
correct description of ancient political life within the *Kel Ferwan* drum-group.

173 The two noble tribes of the *Kel Ferwan* drum-group, namely the proper *Kel Ferwan*, or *Irawatten*,
614 and the *Kel Azel*, have certain traditions about their origin in addition to those mentioned above
634 (p. 413 f.). The noble *Kel Ferwan* (the *Irawatten*) sometimes say that the ancestress of the *Kel Azel*
married an Arab who was killed at her own request, but there is another and more general tradition

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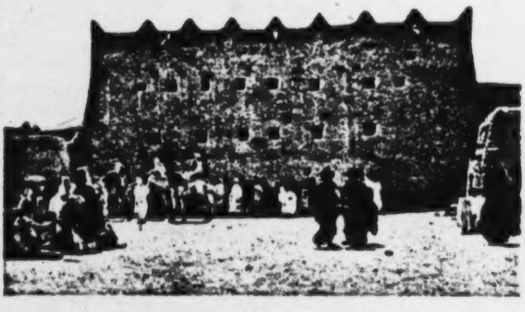

Fig. 288. The palace of the Sultan of Ayr at Agadez. The Sultan has just returned from a short journey out of town and musicians including three drummers mounted on camels (left) are playing in his honour.

according to which the ancestresses of the two noble tribes came from *Awjila* together with a third 173
sister, who became the ancestress of the *Iberdyanen*. This story runs as follows:— 614

The three sisters left their original homeland of Awjila riding on bull-camels. One night when the 634
girls were not very far from Iferwan and the three sisters had gone to sleep, the eldest, named *Sabenas*, awoke before her two sisters and removed the hobble-ropes from their riding camels which disappeared in the desert. Thus the only riding camel left was *Sabenas'*, and when the sisters arrived at Iferwan she alone rode on a bull-camel while her two younger sisters were walking. At Iferwan there was then a mighty chief named *Azeṛezzer*. When the girls arrived there he asked them who they were, and *Sabenas* said that one of the two girls who travelled on foot was her sister, but not her true sister, while the other girl was her *tameṛit* or vassal. The supreme chief *Azeṛezzer* was very eager to marry *Sabenas* as she rode on a bull-camel and consequently was of noble birth. *Sabenas* agreed to marry him on the condition that bride-wealth should be paid in land. And it was agreed that she should have for bride-wealth as much land as she could ride through on her camel at a stretch. She rode off from Iferwan and her camel did not get tired until she was close to Tagedufat south of the Massif. Here *Sabenas* dismounted and threw her stick towards the south. The stick fell down at the well of Tagedufat, and *Sabenas* now had the right to all country ranging from Iferwan in the north to the well of Tagedufat situated in the southern plains. This vast territory has since then been owned by the descendants of *Sabenas* who are the true noble *Kel Ferwan* or *Irawatten*. But the Tuareg of this tribe claim that they have since then greatly augmented their territory so that they are the true owners also of the land south of the Massif as far as Tessawa, which is very close to the frontier of Northern Nigeria.

The noble *Kel Ferwan* Tuareg say that in the past all Tuareg groups within the *Kel Ferwan* territory 173
and a few other groups of Tuareg and negroid sedentary people paid an annual tribute known as 631
tewsé to the *Kel Ferwan* drum-chief. This annual tribute was calculated as follows:— 634
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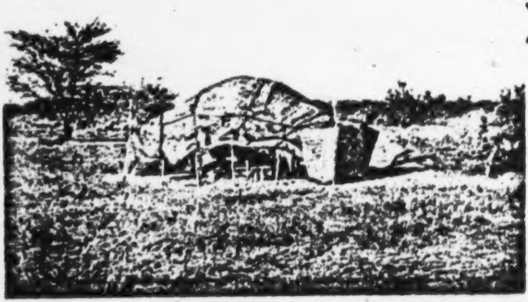

Fig. 289. Mat tent of the B.1.b type inhabited by the *Kel Ferwan* drum-chief. It is a very simple dwelling compared with the Sultan's palace, containing two storeys and several rooms. Nevertheless the *Kel Ferwan* drum-chief in the time preceding the French occupation was politically more important than the Sultan. The photograph is taken in the plains north of Aderbissinat at the end of rains. Annual grasses of a high value for fodder are growing between the scattered acacias, which are also valuable fodder-plants for camels and goats.

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173	*Kel Ewey*	50 Tuareg veils of indigo cotton
631	*Kel Faday*	1 she-camel, 1 riding camel
634 651	*Echchikhen*	two small drum-groups in Damergu each giving 3 oryx hides, as their vassals were mainly hunters
	Kel Geres	1 horse with a saddle
	Kel Dennek of the *Iwllemmeden*	1 she-camel, 1 riding camel
	Kel Allekat	150 kg of millet
	Damergu & Katsena	An amount of millet

Most of these groups, it is said, paid the annual tribute known as *tewsé* because the land belonged to the *Kel Ferwan* drum-chief. But the *Kel Dennek* Tuareg did not pay an annual tribute for this reason but because they were subdued in wars. It is much to be doubted that these annual tributes were paid regularly to the drum-chief by such warlike groups as the *Kel Dennek* and the *Kel Faday*, who frequently joined forces against the *Kel Ferwan*. As to the *Kel Faday*, the noble *Kel Ferwan* Tuareg claim that they were formerly the vassals of the *Kel Ferwan* drum-chief. They say that in the remote past the whole drum-group of the *Kel Faday*, including its noble tribe, paid bride-wealth to the *Kel Ferwan* drum-chief as a token of vassalage, which is said to have ceased in the following way:— The *Kel Ferwan* drum-chief once sent a blacksmith to a *Kel Faday* camp to claim a camel as his part of the bride-wealth from a marriage. But the newly-married man refused to give the camel and furthermore showed his contempt for the drum-chief by cutting off both ears of the blacksmith's riding camel. The blacksmith then returned to the *Kel Ferwan* drum-chief who became furious at this act. The chief immediately decided to go to the camp to take the bride-wealth camel himself. When he arrived in the *Kel Faday* camp a battle developed which was lost by the drum-chief, who had underrated the strength of the *Kel Faday*. He was badly wounded in one leg, but was taken well care of by the *Kel Faday* so that after a time he could return to his own camp. Since then, it is told, the *Kel Faday* Tuareg have not paid any bride-wealth to the *Kel Ferwan*.

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The drum-chief had as an insignia of his political power over all *Kel Ferwan* Tuareg a large drum known as *ettebel* (or *aɣezu*). The word *ettebel* was, and is, used not only as a name of the drum but also as a name of the drum-group and the drum-chief whose title of address is *ettebel*, or "drum". This drum had a sacred or mystic power. Therefore, when the skin was worn and had to be replaced, the man charged with this task would perform it looking away from the drum lest he might be struck blind. It is also said that the drum must never come into contact with soil or water, and that it must never be touched by women. We see that connected with the drum were certain taboos equivalent to those which are believed to maintain the mystic power of *elbaraka*.

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The drum-chief had the only drum of the *Kel Ferwan* group of which he was the supreme chief. The drum followed him on journeys, and there were various signals used to summon his subjects. It is said that these signals should be obeyed not only by members of all vassal tribes but also by the noble *Kel Azel*.
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The chief of the *Kel Azel* had the title of *amɣar* or *aɣolla* like all other tribal chiefs, but he was addressed *ettebel* although he did not have the right to a drum.

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Tribes of the Kel Ferwan Drum-Group

1. *The Irawatten Group*

Tribes	Number of Individuals & Households (Nicolas 1950b)		Notes	Traditional Grazing Grounds
Irawatten	350	58	There are to-day very few pure noble Tuareg of this dominant noble tribe, as the members have intermarried with negroid peoples and with the *Kel Geres*. The pure noble house-holds number about ten. The chief is also the chief of the *Irawatten* group and the drum-chief of the whole *Kel Ferwan* group.	Télewa (western part)
Kel Tédalé (3 tribes)	1300		They claim to be of noble descent. They are officially vassals of the *Irawatten*, but are nevertheless very independent politically.	Talaḳ Uraren Zurika
Kel Akerra	164	39	Of noble descent with the *Ibararojiten* as their particular vassals. Intermarry frequently with the *Imezzureg* and with the *Kel Tédalé*.	Ti-n-Teburaḳ
Imezzureg	106	20	Of noble descent and related to the *Kel Akerra* and the *Isakaranan* with whom they intermarry.	Terezzet
Isakaranan	653	107	Of noble descent and related to the *Kel Akerra* and the *Imezzureg*.	Ti-n-Tebezgin
Igendéynen A section of former slaves known as *Tindeku* is grouped together with this tribe.	247	55	Always close to the camp of the drum-chief as soldiers permanently under his command.	Burhal
Iberdyanen (2 tribes)	621	97	Living close to the noble *Irawatten* as their servants.	Gufat Éknawen Téwendegit
Iḳḳoberen			Living close to the noble *Irawatten* as their servants.	
Ayt Uṛen	160			Maramaru
Idaléyen	218	67		Telhecham

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Ifadéyen (2 tribes)		Kurubobo Imechchamelawen Turuf Beynabu Ti-n-Dawin Anyalen Abalemma Ékawél
Elbaraten		Anwacher
Ibararojiten	Originally the particular vassals of the *Kel Akerra* tribe.	Endegra
Iṭagan	Very few in number and without any tribal organization. They are placed directly under the drum-chief as his servants, and are considered a kind of "white slaves" to other *Kel Ferwan* Tuareg. In the *Kel Faday* group there is a tribe of *Iṭagan* Tuareg. Their traditional homeland is said to be the region of Meneka in the country of the *Western Iwllemmeden*.	Éleleg
Iṛawélen	Pastoral Negroes who in the remote past were slaves of the *Kel Ferwan* Tuareg. Culturally they are akin to other Tuareg pastoralists, but they have no tribal organization and are placed directly under the drum-chief's command.	Tombalaga Akadaney Meygawey

2. *The Kel Azel Group*

Tribes	Number of Individuals & Households (Nicolas 1950b)		Notes	Traditional Grazing Grounds
Kel Azel	180	47	Nowadays very few in number. It is said that there are only four households of pure noble origin.	Anoyaran Tiṛezrin Tafadek Gufat
Imezzuren	162	31		Tiṛezrin

Kel Tésemt	237		Related to the *Imezzilalen* and the *Ikojjejiten* together with whom they are said to have constituted one tribe.	Assa and eastern part of Télewa	634 614 565 162
Imezzilalen		27	Related to the *Kel Tésemt.*	Assa and eastern part of Télewa	
Ikojjejiten			A section of the *Imezzilalen.*	Afarak	
Ifoḳḳar	42	12	Related to the *Kel Tésemt*, the *Imezzilalen*, and the *Ikojjejiten.*	Eastern part of Télewa	
Ikawkan	150		Said to have been the particular servants of the noble *Kel Azel.*		
Ijakarkaren	203	41	Said to be related to the *Igendéynen.*	Tafadek	
Ifoṛas (2 tribes)	396	95	They came to Ayr from Adṛaṛ of the Ifoṛas about one hundred .years ago.	Tédeyin	
Iṛawélen			A certain number of these negroid pastoralists, who once in the past were slaves, is placed directly under the command of the chief of the *Kel Azel.* They have no tribal organization. They are probably included in the figure of the *Kel Azel* mentioned above.		

To-day all Tuareg claim that a chief whether a drum-chief or a chief of a vassal tribe should be 634 succeeded by his son, and that a sister's son may inherit the position. These rules have not always been followed in the election of drum-chiefs in the *Kel Ferwan* group, for the drum-chiefs have always been elected exclusively by the vassals, and after the French occupation they have even elected drum-chiefs who did not belong to the noble *Kel Ferwan*. Most probably it was not so in pre-European times, 173 but the noble *Kel Ferwan* Tuareg unfortunately have a very fragmentary knowledge of their drum- 634 chiefs in the past. They say that fifty chiefs have reigned over the group until now. This figure, of course, should not be taken too literally, although there have most certainly been many chiefs of whom nothing is known. The names are known of the first four chiefs who are said to have reigned over the group in the very remote past, but the more recent are not remembered further back than the latter half of the 19th century.

The first drum-chiefs were the following:—

173 *Sabenas*, the ancestress of the noble *Kel Ferwan* and the first ruler of the drum-group. Her drum
634 was made of iron, they say.

Amenukal, the eldest son of *Sabenas*.

Mokhammed Aman, the younger brother of *Amenukal*.

Elkarebi, the younger brother of *Mokhammed Aman*.

The drum-chiefs known to have reigned more recently are the following:—

Bubeker, who was installed in the latter half of the 19th century. He belonged to the noble *Kel Ferwan* tribe.

Ṛali, who was the younger brother of *Bubeker*. He was the reigning drum-chief when the French
arrived. He is said to have reigned for 55 years. He was considered a very skilful and wise chief, and is
[764] remembered by all Tuareg of the *Kel Ferwan* drum-group with profound respect. *Ṛali*'s tomb is south
of the Massif, somewhat north of Aderbissinat where the present drum-chief most frequently camps.
634 On *Ṛali*'s death-day the drum-chief, his family, and his slaves visit the tomb for a sacrificial feast in
769 which I had the opportunity to participate in 1955. A sheep was ritually killed by the chief, who there-
[282] upon entered the tomb to take soil which was distributed between all worshippers. They put the soil
on the top of their heads and also in their mouths to benefit from the sacred power of the deceased
chief. Ancestral worship of this type is most probably not a traditional custom of the Tuareg, but
has been introduced with Islam. It should be noted in this context that *Ṛali* was considered a member
of the *Echcherifen*, the descendants of the Prophet, through relationship to the *Imenan* (cf. p. 393 ff.).

173 *Mokhammed*, who belonged to the noble *Kel Ferwan* through his mother, while his father came from
634 the *Ifoṛas*. After one year he was dismissed by the vassals. Apparently he was not a close kinsman of
the preceding drum-chief *Ṛali*.

Wanarli, who had no bonds of kinship with the *Kel Ferwan*. His father belonged to the religious, and, in Tuareg opinion, very holy tribe of *Kel es Suk*. He was very strict with the vassals of his drum-group, and he would never take his food in their company, though other drum-chiefs seem to have been less severe. It is probably for this very reason that he was dismissed by the vassals after one year's reign.

Afanu, who belonged to the *Echchikhen*. He died after one year's reign.

Kutiya, who was of noble *Kel Ferwan* stock, being the son of *Ṛali*'s younger brother.

Agg-Elkhir, of pure noble origin being the son of *Ṛali*'s daughter. He gave up his office after a period of some years, but was later re-elected.

Azeṛor, who was the son of *Ṛali*.

634 *Agg-Elkhir*, in his second period of reign. He was the reigning drum-chief during my stay in Ayr 1955. He was then very old, and the French considered his son *Khejji* the actual representative of the drum-group.

Bukha, who is the newly-elected drum-chief. He is the son of *Azeṛor* and the grand-son of the renowned chief *Ṛali*, who was the mother's brother of the deceased chief *Agg-Elkhir*. Consequently *Bukha* is a classificatory sister's son of *Agg-Elkhir* (cf. p. 451, Fig. 294). Before the election took place very many Tuareg of the *Kel Ferwan* group had wanted the deceased chief *Agg-Elkhir* to be succeeded by his son *Khejji*. On the day of election, when all adult men of the *Kel Ferwan* drum-group came

together at the French administration post of Agadez, there were two candidates for the office, namely 634
Bukha and *Khejji*. Present at the election were the French *Commandant de Cercle*, the Sultan, and
other important chiefs. The Sultan requested all men to elect *Bukha* (because *Khejji*'s father *Agg-* 643
Elkhir had scoffed at the Sultan and publicly had called him a slave). Therefore, when the *Commandant*
asked the *Kel Ferwan* men to divide into two groups according to whether they wished *Bukha* or
Khejji, the group of men voting for *Khejji* numbered only four or five men. *Bukha* was thus elected
and the Sultan presented him with a large head-cloth and declared him the new *Kel Ferwan* drum-chief.

From what has been said above about the *Kel Ferwan* drum-chiefs it is evident that the drum-chief 634
was elected by the vassals who constitute the majority of the group. But it is very doubtful whether 643
in the past it was normal for a Sultan to advise the vassals to elect a particular Tuareg for drum-chief.
For though the drum-chief should then also be installed and recognized by the Sultan, the latter was
not strong enough to meddle in the affairs of the drum-group. There are even some noble *Kel Ferwan*
Tuareg who claim that in the past the drum-chief should be installed not by the Sultan, but by a vassal
Tuareg of the drum-group, who appointing the chief would wrap a new veil or a turban around his
head. But most vassals hold that the drum-chief should be installed in this way by the Sultan, and
that in the past, when dissatisfied with a drum-chief, they would ask permission of the Sultan to
dismiss him.

In all internal matters the drum-chief and not the Sultan was the supreme judge, but it seems as 631
if the chief of the *Kel Azel* who was installed by the drum-chief had almost similar judicial rights over 634
his particular vassals. However, any case occurring within the whole *Kel Ferwan* group could be 692
brought before the drum-chief, who in difficult cases would consult Islamic jurists of Agadez, or the
Echchikhen. Punishments for thefts are said to have been very severe. A thief who had not stolen 685
previously was put into jail (*takormut*) in Agadez; if he stole again after his release one of his hands
was cut off, while for a third theft the penalty was capital punishment said to be carried out at the
market place of Agadez in a very cruel way:— pointed sticks were placed under the man's armpits,
under his chin, and under the back of his head so that he would die when no longer capable of
remaining standing. A few old people remember that they have seen this method of punishment
practised in Agadez. Punitive measures like imprisonment and capital punishment are no doubt 681
foreign to traditional Tuareg law, and were in all probability originally practised by the Sultan. As
the drum-chief of the *Kel Ferwan* was in fact the true master of Ayr, including the city of Agadez, 634
he may have made use of the prison and may also have imposed capital punishment on thieves. Proper
theft seems to have been very rare among pastoral Tuareg in the past, but to-day camel-thieves are
extremely common in all groups. Some Tuareg say that in the past there were hardly any camel
thieves who were hanged like dogs.

All members of the *Kel Ferwan* group could be fined by the drum-chief and indemnities (*édeyet*) 634
were then given to the chief. In case of murder the killed person's kinsmen had the right to blood- 682
revenge to which the drum-chief could make no objection. But if the family of the person killed con- 681
sented, the drum-chief could take all livestock from the murderer and pass it over to the children of
the slain man, whose kin in that case lost their right of revenge. Some Tuareg will claim that the

634 livestock of a murderer in reality was the property of the drum-chief. Apparently there has never
682 been any fixed size of blood-wealth among the *Kel Ferwan* in contrast to the two groups of Northern
Tuareg and Arab tribes of the Sahara.

634 The token of vassalage among the *Kel Ferwan* was the payment of half of the bride-wealth to the
565 noble lords so that the drum-chief received bride-wealth from his particular group of vassals, the
chief of the *Kel Azel* from his group. The two noble lords received other payments from their vassals.
651 They would inherit a camel on the death of an individual vassal, and they received certain annual payments known as *sadakat* or *tamesodek*. This fee in its origin was a religious one, and certain tribes such as the *Imezzureg*, the *Kel Akerra*, and the *Isakaranan* claim that in the past, as nowadays, they made this payment to the *Ineslemen* Tuareg and not to the noble chiefs. But true vassal tribes gave their *sadakat* or *tamesodek* to the two noble lords. The fees were collected on behalf of the lords by people of the *Echchikhen* and by negroid blacksmiths, who are very numerous in Ayr. There were definite rules for the payment of the *sadakat* fees which were computed from the size of herds and flocks of all domestic animals with the exception of donkeys for which no payment was made. As an example the payments for camel herds can here be mentioned:—

Size of herd	*Sadakat* or *tamesodek*
10 camels	2 goats
15 camels	3 goats
25 camels	1 young camel
50 camels	1 full-grown camel
100 camels	2 full-grown camels

The *Echchikhen* and the blacksmiths took the *sadakat* animals to the two noble lords, who gave some
432 of them to the collectors, themselves exempted from taxation. The bulk of the animals was sold at
735 the market of Agadez and most of the proceeds given to poor people by the noble lords, who would
keep a small part for themselves.

634 The two noble lords, the drum-chief and the chief of the *Kel Azel*, had the right to parts of war-
721 booty taken by their vassals according to the following rules:—

565 (1) *témaggedaz*, that is booty taken on raids organized by the noble lords, the drum-chief or the chief of the *Kel Azel*. The term refers to any kind of booty, e.g., riding camels, she-camels, horses, cattle, etc. Half of such booty according to the noble Tuareg was the right of the noble lords, while the other half should be given to their vassals. Vassal Tuareg nowadays know extremely little about these old rules, but I met one vassal Tuareg who claimed that only one seventh of the booty should go to the noble lord. The word *téfudes* is said to have been used synonymously with *témaggedaz*.

(2) *téwit*, that is booty taken from foreign groups of Tuareg, or from Arab and Tebu pastoralists attacking camps of the *Kel Ferwan* group. In other words this kind of booty comprises riding camels and horses taken from assailants who run away, are killed, or are made prisoners. Under such circumstances it is said that the noble lord would take a number of riding animals at his discretion. A particular case is related of a group of *Iwllemmeden* Tuareg attacking a camp of *Kel Ferwan* vassals

placed directly under the drum-chief. The vassals counter-attacked and won the battle. They made 634
four prisoners and took as booty two horses and several riding camels (unknown how many). As his 721
part the drum-chief took one horse and five camels. But he also took the four prisoners to his camp. 565
He kept them there for about a month, when they were released, dressed in new clothes, and mounted [727]
on excellent riding camels with good saddles.

(3) *ékechchedi* – perhaps written *ékeijedi* – that is booty taken by vassals during raids carried out without the permission of their noble lord. In this case the latter would take all booty for himself and leave nothing for the vassals, who were not allowed to engage in warfare and raiding on their own account – unless attacked by foreign raiders.

We see from the above-mentioned rules that the political system of the *Kel Ferwan* group is based 634
upon a more strict relationship between noble Tuareg and vassals than among the Ahaggar Tuareg. 565
It is very interesting that the *Kel Ferwan* vassals made no annual payments for land-rights. Any vassal [184]
tribe lived within a particular territory which was given to it by the drum-chief, and the vassals were [423]
not allowed to defend their areas without his consent. The drum-chief claimed to possess all land and
he gave particular grazing grounds to particular tribes.

Even vassal Tuareg say that the drum-chief could be very strict and severe with them in the past.
But here it should be remembered that there were limits to his power, as he could not refuse his subjects
the right of blood-revenge. It should also be reiterated that the drum-chief was elected by his vassals,
who could also dismiss him. And strictness or severeness with his vassals was not the drum-chief's
normal way of conduct. Like other noble Tuareg he would normally not only associate with the vassals
on intimate terms, but would also joke with them. A joking-relationship (*adélen*) related to that of 565
cross-cousins and brothers and sisters-in-law, including sham-fights and minor "thefts", existed be- 571
tween all noble Tuareg and all vassals of the *Kel Ferwan* group. They would joke with each other 634
unless there was a great difference in age. But although joking was reciprocal, it is said that the drum-
chief could stop joking, in which case the vassals would "be afraid of him". "People who are different
tease each other to prevent trouble", the Tuareg say. For this reason there was joking between noble
Tuareg and vassals, but joking between members of these two different Tuareg classes did not occur
unless they belonged to the same drum-group. There would be no joking between vassals of the *Kel
Ferwan* group and noble Tuareg of the *Kel Faday*. In this latter case there would be avoidance or
strict reserve. There seems to be little doubt that joking played an important part in the maintenance
of the class-division which formed the basis of political organization. It is important to mention in
this context that joking among the Tuareg is a sign of friendship. It prevents conflicts and thereby
it establishes a friendship relation. This is true also of present day joking between noble Tuareg and [564]
vassals, and between all Tuareg and various black-skinned people such as the *Ineggedezen* and even
slaves. This particular type of joking relationship is clearly related to that between cross-cousins, the [601]
more so as joking partners of different classes or castes will very frequently address each other as
abubaz (pl. *ibubazen*), that is "cross-cousin". I return to the functional position of joking in Tuareg
society in a later chapter.

It is said that marriages between noble Tuareg and vassals did not take place in the past. This 565
statement seems to be almost true, for though I have enquired much into this matter I have only 582
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565 been told about two such marriages which seem to have been contracted in fairly recent times. I think
582 that the main reason why the noble Tuareg do not marry with their vassals is that such marriages
634 would tend to break down the structure of the political system, as the noble Tuareg, including the
drum-chief, would acquire a great many in-laws among vassals to whom the conduct would be
institutional joking or avoidance. For in addition to true relatives by marriage there are numerous
classificatory ones. This will become clear from the description of the rules of behaviour valid for
relatives by marriage.

634 In spite of the application of the rules of joking relationship on a political level, troubles within
the drum-group were far from unknown. And it is remarkable that even between the related tribes
578 of *Irawatten* and *Kel Azel* there might be very severe quarrels. There was a latent opposition
614 between them which might occasionally lead to fighting between noble Tuareg of the two groups.
565 The existence within the drum-group of another noble tribe, the *Kel Azel*, with a certain
number of vassals was always a danger to the position of the drum-chief as a ruler of the whole
[661] *Kel Ferwan* group. And noble Tuareg of the *Irawatten* tribe say that in the past it even happened that
the drum-chief punished the *Kel Azel* very severely, not only taking all their livestock, but also burning
[701] down their camps. The drum-chief was able to maintain his power over the whole *Kel Ferwan* group
because most vassal tribes were placed directly under his command, and because these tribes camped
around Agadez which was dominated by him.

The drum-chief also had trouble with another tribe of his group, the *Kel Akerra*. This tribe is said to have been originally of noble status and to have had as its particular vassals the *Ibararojiten* tribe. In the past the drum-chief assisted by vassals of the whole group imposed vassalage upon the *Kel Akerra*, who, however, refused to give him part of their bride-wealth. It is said that the drum-chief three times made war against the *Kel Akerra* to bring them to submission and each time they were severely beaten. Nevertheless they refused to pay bride-wealth to the chief, who then ceased to claim it. As a result of these wars the *Kel Akerra* tribe became small and insignificant. It is said that the tribes of *Imezzureg* and *Isakaranan*, who like the *Kel Akerra* are noble by origin, also did not give their bride-wealth to the drum-chief in the past. But the three tribes were vassals in the sense that they had to give part of their war-booty to the drum-chief and could not carry out raids on their own.

[701] A certain discord reigned within the *Kel Ferwan* group, but the drum-chief had the support of most
tribes of vassals, who at his order would fight not only foreign Tuareg groups, but also quell internal
634 insurrections. However, the three northern tribes of *Kel Tédalé* were so numerous, so rich in camels,
614 and lived so remote from the rest of the *Kel Ferwan* tribes that the drum-chief could not maintain
his power over them. They were only nominally part of the *Kel Ferwan* drum-group. My information
confirms Joubert's statement that the *Kel Tédalé* paid no tribute to other chiefs (Joubert 1939, p. 246),
though it is said in Ahaggar that in the past they paid an annual tribute to the *Amenukal* of Ahaggar.
But the *Kel Tédalé* were politically independent of other groups in Ayr, which is also stated by Jean
565 (Jean 1909, p. 104). The noble *Kel Ferwan* Tuareg claim the *Kel Tédalé* to be true vassals of their
614 drum-chief, and both Jean and Nicolas list them as vassals (Jean 1909, p. 104; Nicolas 1950b, p. 475).
Rodd thinks that both noble and vassal Tuareg were originally found in the three tribes the homeland
of which was probably Ahaggar (Rodd 1926a, p. 427). The *Kel Tédalé* Tuareg I met all emphasized

their noble origin, but Rodd's explanation was verified by ***Kel Ferwan*** vassals who said that both 565
noble and vassal Tuareg are found among the ***Kel Tédalé***. That some of them are noble by origin 614
seems to appear from the statement of Nicolas that the ***Kel Tédalé*** in part are related to the ***Ihaḍanaren***
of Tasilé-n-Ajjer (Nicolas 1950b, p. 475). For the latter tribe, though without vassals, is considered
noble by all Northern Tuareg.

As to the origin of vassalage among the Ayr Tuareg, it is probable that this is due to the meeting 565
of distinct cultures based mainly on camel-breeding and goat-breeding. Rodd has some very interesting 233
remarks on the position of the vassals as camel-herdsmen of the noble Tuareg. He says as follows:— [174]
"One of the functions of the Imghad is to take complete charge of and use the camels of their lords for long periods or trade with them on their behalf. In such cases the Imghad act as the agents of the nobles, each one of whom has a right to ask the servile tribe as a whole to undertake these duties. But such obligations are imposed collectively on the tribe and not on any one Imghad. It is the custom to share the offspring of the camels thus herded in equal shares, though in the event of any of the animals dying whilst under the charge of the Imghad, the latter are collectively responsible for making
good the loss, save in extenuating circumstances" (Rodd 1926a, p. 141 f.). Rodd, however, also refers [567]
to the importance of slaves as camel-herdsmen both among noble and vassal Tuareg (Rodd 1926a, p. 136). As far as my own information goes, camel-herding and caravan trading were in the past attended to mainly by slaves, and the noble Tuareg in particular were slave-owners. I have not been able to confirm Rodd's statement that the vassals were formerly the particular camel-herdsmen of the noble Tuareg. But I have been told by many Tuareg that there were in the past very few camels in vassal tribes, and though most Tuareg apparently hold the view that the vassals have always had camels, the Sultan ***Umar*** claims that originally they had none while the noble Tuareg have owned
these animals since times immemorial. So it might seem as if the political system of the drum-group 174
in Ayr, as in Ahaggar, was founded upon a class division with its root in the meeting of distinct 565
pastoral cultures. It is a fact that certain vassal tribes were attached to their noble lords as a kind 634
of workers with the duty of performing such work as could not be done properly by negroid slaves. Among these tribes were the ***Ikawkan*** attached to the ***Kel Azel***, and the ***Iḳḳoberen*** and the ***Iberdyanen*** attached to the ***Irawatten***.

It is most likely that the noble ***Kel Ferwan*** Tuareg had vassals before they arrived in Ayr, for many true vassals hold that they have immigrated from the traditional homeland of their noble lords. However, there are in Ayr also certain tribes which have lost their noble status and become a kind of vassals owing to having been subdued in fairly recent wars.

THE KEL GERES DRUM-GROUP

There is no class-division of so-called noble Tuareg and vassals among the ***Kel Geres***. In this respect 642
they differ from most other Tuareg groups except for the ***Kel Ewey*** among whom a division into classes 565
of this kind has ceased to exist – probably because the ***Kel Ewey*** have mixed with the sedentary negroid population of the Ayr villages. In ***Kel Ewey*** certain tribes are more important than others, but

642 there are no true vassals or *Imṛad* though some *Kel Ewey* tribes are referred to in literature as
565 vassals.

174 The lack of the important structural feature of vassalage among the *Kel Geres* may perhaps be
642 explained in the following way:— The *Kel Geres* Tuareg lived originally in Ayr within much the same
565 area as that now occupied by the *Kel Ewey*, and it is most likely that they had mixed very much with
[144] the sedentary Negroes as there are among the *Kel Geres* very many black-skinned and negroid Tuareg. It is very probable that the *Kel Geres* when living in Ayr led a semi-sedentary life, for it is said that they had very few domestic animals when they left Ayr in the 18th century owing to the pressure of the *Kel Ewey*. We may perhaps assume that this particular mode of livelihood was the reason why vassalage ceased to exist among the *Kel Geres*. When, in the 18th century, the *Kel Geres* were driven southwards into the Sudanese steppes and savannahs, they became ardent stock-breeders and adopted a political system much related to that of an ordinary Tuareg drum-group with the exception that they had no class-division.

614 Among the *Kel Geres*, all tribes of pastoral Tuareg are known as *Imajeṛen* but though they are not
642 divided into classes these tribes are nevertheless not politically identical. The most important tribe
643 is that called *Ti-temeḳḳeret*. It is named after Anu-Meḳḳeren in Central Ayr where this tribe originally lived, and the *Kel Geres* drum-chief (*ettebel*) is always elected from this particular group. But the drum-chief is not elected by all adult people of his drum-group, but by members of three tribes, the *Anyegeren*, *Ireyawen*, and *Kel Awnar*. The members of these tribes alone can elect and dismiss a drum-chief entirely at their discretion. When they have elected a new drum-chief he is ceremoniously installed by a man of the *Anyegeren* tribe who wraps the large head-cloth around the chief's head. In all this the *Kel Geres* resemble the *Kel Ewey* among whom the *Anestafidet* is elected by the members of three important tribes.

The three tribes of *Anyegeren*, *Ireyawen*, and *Kel Awnar* are also politically very important in other respects for they consistute the nuclei of three sub-divisions of the *Kel Geres*. The chiefs of the three tribes have the title *Aṛolla* (pl. *Iṛollan*) and they are also the chiefs of certain other pastoral tribes
[563] which have individual chiefs with the title of *Amṛar* (pl. *Imṛaren*). A certain number of people who are non-Tuareg by origin are placed under the authority of all tribal chiefs, e.g., *Iṛawélen* who are slaves manumitted in the past, *Ikenawen* who are professional potmakers, *Ineden* or blacksmiths, and *Itéfnen*, that is sedentary Hausa living in villages.

614 In addition to the tribe of the drum-chief and the three *Iṛollan* tribes, there is among the Kel Geres
642 a fifth tribe which is politically very important, namely that known as *Ezuṛmani*. It is a religious tribe
645 of the so-called *Echchikhen* class, and its chief is known as *Echchikh* though he also bears the title of *Al-Ḳadi*. He acts as the adviser of the drum-chief in judicial and religious matters, and though he apparently possesses no direct authority over all *Kel Geres* he is very influential and greatly respected. The *Al-Ḳadi* or *Echchikh* is elected according to the traditional rules of succession acknowledged by the *Kel Geres*, a deceased chief being succeeded by his younger brother or by his son. But in contrast to all other chiefs, including the drum-chief, he cannot be dismissed when he is once elected. All religious tribes within the *Kel Geres* drum-group are placed directly under the authority of the *Al-Ḳadi* (*Echchikh*) of the *Ezuṛmani* tribe. But the *sadakat* fees are made to the drum-chief and not to the Al-Ḳadi.

the *Al-Ḳadi.* In this respect the position of the *Kel Geres* drum-chief is similar to that of drum-chiefs 643
among the Ayr Tuareg, and though the present drum-chief says that the *Kel Geres* were never divided
into noble and vassal tribes, he nevertheless claims that part of any war-booty taken by *Kel Geres*
Tuareg in the past should be given to the drum-chief who had the right to *témaggedaz* and *téwit* (cf.
p. 428). The drum (*ettebel*) of the *Kel Geres* drum-chief is akin to drums of other Tuareg chiefs. [534]
The drum must not touch the ground, but the drum-chief did not believe that its power would be [778]
spoilt were it to be touched by women.

THE KEL ADṚAṚ

The *Kel Adṛaṛ* are very superficially described in literature, but their political system has been outlined 642
by Cortier. They constitute only one drum-group under the leadership of an *Amenukal* who is the 565
possessor of the drum (*ettebel*). The class-division is rather similar to that of most other Tuareg groups.
There are certain vassal tribes (*Imṛad*) and certain noble tribes though the latter are not considered
noble in the usual sense. They are known as proper *Ifoṛas* Tuareg and they are to be grouped rather
with the *Ineslemen* class than with the proper noble class termed *Ihaggaren* or *Imajeṛen.* However,
their position within the drum-group is almost identical with that of noble Tuareg in other groups.
The *Amenukal* is elected according to patrilineal rules being succeeded by his younger brothers and [643]
next by his sons, but the vassal tribes do not participate in the election. Within the drum-group there
are many smaller divisions of noble families who have their individual vassals, so that from any vassal
tribe there are always certain families living in the camp of a noble lord to work for him and to guard
his domestic animals. A noble Tuareg can also claim what he wants from his particular vassals while
on the other hand the vassals do not pay any fixed tribute to the noble chiefs, not even to the *Amenukal.*
The power of the *Amenukal* is a very limited one, and his position is mainly determined by his personal [643]
qualities (cf. Cortier 1908, p. 274 ff.).

THE IWLLEMMEDEN KEL DENNEK

The *Kel Dennek*, that is the *Eastern Iwllemmeden* around Tawa, have been described in detail by 642
Nicolas who, however, is not very clear as to particulars. Apart from the class of *Ineslemen* the *Kel* 643
Dennek Tuareg are divided into the classes of noble Tuareg (*Imazeṛen*) and vassal Tuareg (*Imṛad*, or 634
Kel Ulli). These vassal Tuareg are politically attached to four drum-groups (*ettebel*) in which the drum- [565]
chief is elected from a noble tribe according to patrilineal rules. One of these drum-groups has a [114]
leading position, as its chief with the title of *Amenukal-n-akal* is the supreme chief of the whole *Kel*
Dennek group known as *tégezé.* In addition to his drum this supreme chief (*Amenukal-n-akal*) has a
burgee or flag to be used in case of a holy war and on certain ceremonial occasions such as the installation
of an *Amenukal.* This flag is made of silk and is green, blue, and red in colour. The title *Amenukal* is

The title of Amenukal is

634 used for other important chiefs but the *Amenukal-n-akal*, while the title *ettebel* is reserved to those
565 chiefs that command a drum-group and possess a drum. These drum-chiefs, including the *Amenukal-n-*
651 *akal*, have the right to an annual tribute known as *Šiuse* (*chiwsé*) from their individual vassals, and it seems as if the tribute known as *sadaḳa* or *tamessadeḳ* must also be given to them, because the drum-chief is inseparable from his *Ḳadi* or *Imam* who shares this tribute, originally a purely religious one. It would appear that the drum-chief also has the right to *tekasit* or *takote* (*takuté*), that is the
634 right to inherit part of the fortune left by deceased vassals. As in Ahaggar, the drum-chiefs have certain
565 delegates or representatives who are known as *Khalifas* or *Anemazul*. It also seems as if there were in the past, as in Ahaggar, smaller units of noble Tuareg and vassals, and it is stated by Nicolas that the vassals were under the obligation to guard the herds of their noble lords. The vassals have the right to take part in political or judicial councils (*ameni* and *zemaret*), but they have no right to take part in decisions, or to vote at the election of a drum-chief. They had also no right to possess camels. The noble Tuareg had all political rights and the privilege of waging war. They had the right to war-booty which they would distribute among their vassals who might even be wealthy. – These are the
[178] main features of the *Kel Dennek* system. It began to break down already in 1900, and there has been
[642] no supreme chief of the *Kel Dennek* since 1917 (cf. Nicolas 1939, p. 579–586 & 1950a, p. 188–193, 201–209).

THE IWLLEMMEDEN KEL ATARAM

642 The *Kel Ataram* have been little written about. The best description is given by Richer who says that
565 in pre-French times the South-western Tuareg were divided into two federations:— (1) the *Kel*
[614] *Tademaket* around Timbuktu and (2) the *Iwllemmeden Kel Ataram* around Gao and Meneka. In both federations there are noble Tuareg (*Imuchaṛ*) and vassals (*Imṛad*, sing *Ameṛid*, or *Daṛa*). The dominant noble class holds its power because of its pure origin and strength. The vassals are more mixed with
[567] Arabs and Negroes. They have herds of their own and slaves (*Bélla*). They pay *tiwsé* to the noble Tuareg, but this payment is a very small one and mainly to be considered a symbolic admission of the supreme power of the noble Tuareg. The noble Tuareg in the past had to protect their vassals, but the vassals accompanied their noble masters on raids and were given part of the war-booty. All
[614] tribes, whether noble or vassal, have a chief known as *Amṛar*, but all important decisions are made
[646] by the *myad*, that is a council of noble Tuareg with their chief acting as a kind of president. This
643 council of noble Tuareg elects a supreme chief with the title of *Amenukal*, but the vassals also have the right to vote at his election. The *Amenukal* is mainly occupied with foreign policy and with warfare. He is always elected from the same tribe, but his office is not hereditary nor is it necessarily held for a lifetime. The insignia of the *Amenukal* is the drum, *tobol*. Richer gives no further particulars of
642 the political system, and many of the vassals had already at his time gained an entirely free position
565 [614] (Richer 1924, p. 3 f.). – To this description given by Richer I add a few notes taken from Aymard:— Vassal tribes can have a superior position in relation to other vassal tribes. Thus many small and weak tribes are commanded by the *Kel Gossi* and *Idnanes* who are vassals. A noble Tuareg does not marry a vassal woman, while a noble woman may marry a vassal Tuareg as her children will become noble.

The political supremacy of the nobility is founded upon conquest and has become hereditary, but 642 this supremacy can be lost. If a vassal tribe conquers a noble tribe the rôles may change, and though 565 this has not yet happened the principle is considered valid by all Tuareg. The vassals pay an annual tribute to the noble Tuareg. A noble Tuareg can take what he likes from a vassal, but his rights depend upon his strength, just as the tributes paid by vassals depend upon the strength of their noble lords. A noble tribe must protect its vassals against other noble tribes. Chiefs of both noble and vassal [614] Tuareg tribes have the title of *Amenukal*, and this title is hereditary. The power of the supreme noble chief (the *Amenukal*) is such that he cannot kill obstinate subjects. But he can thrash them and even 643 wound them, and he can seize their property. There may be more than one candidate when a chief is elected, and this may lead to severe quarrels and even to the division of the tribe (cf. Aymard 1911, p. 37 ff.).

Mangeot & Marty in their study of the Niger Tuareg mention that even in pre-European times 642 certain tribes of vassal status had no particular duties towards noble tribes. They also state that the 565 relationship between noble and vassal Tuareg was breaking down shortly after the French occupation [178] of the country. The traditional *tiwsé* payments made by vassals to their noble lords differed much from one tribe to the other. Certain vassal tribes gave only one container with butter annually (Mangeot & Marty 1918, p. 258, 461). The chief *Amdeɣ* of the noble *Kel Tahabanat* informed that the *tiwsé* payments, which were abolished long ago, were always insignificant. They were made in goats and butter. The chief also said that originally the *Imɣad* tribes had no camels.

THE ORIGIN OF TUAREG POLITICAL SYSTEMS

We see from the description above that Tuareg political systems bear resemblances to one another 642 in most groups. The largest political unit is the group under the leadership of a supreme chief, generally 631 known as the *Amenukal*, or as *Amenukal-n-akal* in the *Iwllemmeden* groups where the title *Amenukal* 643 is used also for minor chiefs. The *Amenukal* of a political group is also the chief of a so-called drum-group within the larger political group, though in Ayr the *Amenukal* is identical with the Sultan of Agadez. We may say that the political group known among the Northern Tuareg as *tégehé*, in the *Iwllemmeden* groups as *tégezé*, has a central government consisting of the *Amenukal*, his deputies, and a council. And it is clear that the *Amenukal* everywhere was considered the supreme chief with superior judicial rights and also the war-leader of the whole group. But the authority of an *Amenukal* was in all groups a very limited one, and quarrels between the various drum-groups of a federation were very common everywhere.

The most important political unit of Tuareg political systems was in fact the drum-group. Its chief 634 was always a most important person. In most groups he was elected mainly by the vassals, and he was not an absolute monarch, though normally he could obtain the support of most vassals to quell internal insurrections. Within the drum-group the drum-chief was the highest judicial and military authority, and it was he who had to regulate all relations between noble and vassal Tuareg within the drum-group. Other noble Tuareg, e.g., the *temazlayt* masters, within the drum-group had no [565]

634 judicial or military authority, and the vassals could complain over their noble lords to the drum-chief,
565 whom they could even dismiss if dissatisfied with him.

[422] In some Tuareg groups the vassals were not allowed to possess camels, and it is interesting here to
mention that among certain East African peoples cattle or productive cows are owned only by people
[171] of a noble or aristocratic class (cf. Roscoe 1923a, p. 51; 1923b, p. 2, 15; Oberg 1940, p. 130; Maquet
1954, p. 29, 171). Where Tuareg vassals owned camels the noble Tuareg had the right to make use
of these animals, and even to-day there are vassal Tuareg of Ahaggar who give their milk-yielding
she-camels to the nobility.

642 In some Tuareg groups there seem to be traditions in favour of the theory that the class-division,
565 which forms the basis of most Tuareg political systems, arose as the result of the conquest by pastoral
[173] camel-breeders of nomads or semi-nomads subsisting mainly on goat-breeding. We have mentioned
that the word *Kel Ulli*, which means literally "the goat people", are used as a generic term for vassals
among the Northern Tuareg and also among the *Kel Dennek* of the *Iwllemmeden* Tuareg. We have
also seen that the word *Imṛad* is used for "vassals" in all groups, and it perhaps also refers to goat-breeding
with the meaning of "a kid" (cf. p. 408). If this latter explanation be correct it might seem
that the word "*Imṛad*" was originally a contemptuous term, and this is in accordance with the fact
that vassals among the *Kel Ahaggar* do not use this term, and do not like to be known by it, though
they have nothing against the term "*Kel Ulli*".

565 Even to-day there is a certain cultural distinction between noble Tuareg and vassals of Ahaggar.
[262] Rich noble Tuareg will whenever possible subsist on camel's milk, while vassals, although they may
be rich in camels, attach much importance to the breeding of goats and the manufacture of butter
[492] and cheese. The noble Tuareg use camels for the transportation of tents during nomadic migrations,
while even rich vassals will generally use donkeys. Noble women possess special riding saddles for
camels, but they are unknown in the class of true vassals. Vassal women do not generally ride camels,
but donkeys, which are never ridden by noble women. Noble Tuareg and vassals of Ahaggar are
culturally different in other respects, and I attach a particular importance to the following distinctions:—
[583] (1) In noble tribes bride-wealth is seven camels, in vassal tribes it is one to three camels,
alternatively perhaps goats. Among vassals of Tasilé-n-Ajjer bride-wealth is 25–30 goats. (2) The
[233] noble Tuareg brand camels and donkeys with a red-hot iron, whereas true vassals use earmarks for
donkeys, as they do for goats. However, in one vassal tribe, the *Dag Ṛali*, donkeys are marked in
[422] both ways. (3) Among noble Tuareg the tent belongs to the husband, among vassals it is owned by
the wife. (4) The noble Tuareg frequently use a tent with a central T-shaped post which is said to be
[342] peculiar to the tents used by noble Tuareg. (5) The bandoleer known as *tirẓemin*, or *ibeyderen*, perhaps
[293] connected with camel-riding, is said to have been used originally among noble Tuareg and not among
[262] vassals. (6) The noble Tuareg do not eat birds, eggs, fish, and reptiles, while vassal Tuareg will not
refuse food of this kind. It can be added that elements of an ancient hunting culture are found particularly
[224] among vassals, who use the hunting spear with a wooden shaft, the spiked wheel-trap, and
[174] other ancient hunting methods. There are other distinctions between noble Tuareg and vassals, but
[233] the two originally distinct cultures have largely merged. Certain noble Tuareg to-day have large flocks
[462] of goats which, however, are tended exclusively by slave women. Apart from sewing, embroidering,

and the manufacture of decorated leather-bags, camel-reins, etc., and decorated wooden milk-bowls, 565
the noble women do extremely little work. 462

Among the *Kel Ajjer* we find some of the above-mentioned distinctions between noble Tuareg and 565
vassals. The traditional dwelling of many vassal Tuareg of Tasilé-n-Ajjer is the cylindrical hut (house) 342
with a conical roof, though vassals in winter use skin-tents during nomadic migrations. Nowadays
noble and vassal Tuareg alike live in straw-huts throughout the hot season. Barth, in his description 565
of the *Kel Ajjer*, mentions that the vassals have no right to possess iron spears and swords (Barth 411
1857–58, I, p. 257), but it is stated explicitly by Duveyrier that noble Tuareg and vassals have the
same weapons – the shield included (Duveyrier 1864, p. 334 ff.). There can be little doubt that Duveyrier's statement is true, and I have been told among all Tuareg that in the past noble and vassal Tuareg
did not differ in regard to weapons. A distinction would also seem rather strange in view of the fact
that Tuareg of both classes fought together. Barth says that noble Tuareg and vassals differ in dress,
but he does not give details (Barth 1857–58, I, p. 257).

As to the Ayr Tuareg of the *Kel Ferwan* group, both noble and vassal Tuareg say that in the past 565
there were hardly any cultural distinctions between them. Bride-wealth in both classes was paid in
camels. We know that the Ayr vassals in the past were predominantly goat-breeders, like many Ayr
vassals to-day, and it seems as if camel-breeding was once a privilege of the nobility in the *Kel Ferwan*
group (cf. p. 431; cf. tradition on the origin of the noble *Kel Ferwan*, p. 421). I have not been
able to find differences between the two classes in regard to material culture and social organization.
The noble Tuareg of the *Kel Ferwan* group say that they never have had types of portable dwellings
other than the barrel-vaulted mat tent, which traditionally belongs to the woman.

There is very little information about cultural distinctions between noble and vassal Tuareg in other
groups. Among the *Iwllemmeden Kel Ataram* the vassals apparently use the arched mat tent more
frequently than do noble Tuareg, but this and the skin tent supported by vertical sticks carrying cross-bars are found in both classes (cf. Barth 1857–58, I, p. 372 f.; Gabus 1945, p. 361 & 1948a, p. 15 &
1948b, p. 16). Among the *Iwllemmeden Kel Dennek* the mat tent is used by certain noble Tuareg
(Nicolas 1950a, p. 156 f.). According to the chief *Amdeɣ* women's riding saddles for camels (*akhawi*)
among the *Kel Ataram* are found only in noble tribes. Vassal tribes of the *Kel Ataram* living close to [428]
the Niger even to-day practise matrilineal rules of inheritance and succession in contrast to noble
tribes with rules of patrilineal succession and Ḳoranic inheritance (cf. p. 457).

Cultural distinctions between noble Tuareg and vassals are particularly prevalent in the two groups
of Northern Tuareg, and it is significant that the traits characteristic of the noble class are also common
among the *Iregenaten* who live in Tamesna. This tribe is said to descend from mixed marriages between Tuareg women of the *Ibetteṛaten* tribe, which claims noble descent, and Arab men. This explanation is found in literature (cf. Lhote 1955, p. 238 f.; Briggs 1958, p. 100) and has been confirmed
to me by Tuareg of this tribe. It is interesting that some traits characteristic of the noble tribes among
the Northern Tuareg are also found in tribes of the *Isekkemaren* class. The tribes of this latter class [171]
are said to be related to Arabs among whom we also find some of these traits.

We do not know when the noble Tuareg in the northern groups adopted traits that are also found 177
among Arab bedouins. One might perhaps venture the theory that some of them were introduced

177 with the immigration of the noble *Ti-n-Hinan* tribes which were, perhaps, related to the northern *Hawwara* Berbers. These may have influenced also the *Iwllemmeden* Tuareg who possess some of the traits common to Northern Tuareg and Arabs. The *Hawwara* tribes came under Arab influence at very early stage, and they may have adopted Arab traits before they migrated southwards to settle close to the veiled *Lemta* (cf. p. 409 f.).

64 It is evident that the origin of pastoral political systems dates back to pre-Islamic times, but it is
177 also very clear that political organization has been much influenced by Islam and the Arabs. With
Islam and the Arabs came into political life such important classes as the *Ineslemen*, the *Echchikhen*,
and the *Ichcherifen*, which has made the political organization more complex. Also introduced with
Islam was the *sadakat* fee, which in its origin was a purely religious payment. It is also clear that the
182 rules of blood-wealth payment among the Northern Tuareg (cf. p. 102) were introduced with Islam,
for the Arabs of Northern Sahara, like the Northern Tuareg, give one hundred she-camels for a slain
man, and the same payment is fixed by learned Islamic jurists (cf. Schram-Nielsen 1945, p. 58 f.).
These rules of blood-wealth payment do not seem to have been accepted among the Ayr Tuareg where
there was no fixed amount of camels to be paid for a homicide. Finally the title *Khalifa* given to tribal
deputies was doubtless introduced with Islam and the Arabs. This title is used among the Northern
Tuareg and also among the *Iwllemmeden Kel Dennek*.

634 The problems connected with the origin of the drum-group, the most important political group,
534 are very complicated. It is well known that the drum plays an important part as an insignia of kings
171 and other supreme chiefs over large parts of Africa. The distribution of the drum as an insignia of kings
and chiefs has been studied in some detail by Schilde and Wieschhoff, and later by Irstam (cf. Schilde
1930, p. 117 ff.; Wieschhoff 1933, p. 119 ff., map 34; Irstam 1944; p. 28, 101 ff.). Wieschhoff points
out that the drum as a royal insignia is pre-Islamic in Africa, and that it mainly has this particular
function in state organizations of the so-called Erytrean Cultures.

634 The drum which constitutes the insignia of a Tuareg drum-chief is known as *ettebel* or *ettebel*. In
634 all Tuareg groups this word is also used for "drum-group", and among the *Kel Ayr* and the *Kel Geres*
it is also a title of drum-chiefs. The word *ettebel* is undoubtedly derived from the Arabic word *tobol* (cf. Foucauld 1951–52, IV, p. 1922), which is also sometimes used for Tuareg drums as it is for drums of chiefs among the Western Moors (Dubié 1947, p. 173). Formerly, the Sultan of the Fezzan also had a drum which according to Lyon was known as *tubbel*. Lyon never saw a drum of this kind but he says that they are found in all towns south of Murzuk (Lyon 1821, p. 248 f.). The drums used by Tuareg chiefs are always of a very particular form, generally known to anthropologists as "the kettle-drum", and this particular drum among the Tuareg is never used by persons other than the chiefs. For ordinary music the Tuareg have other drum types or use a wooden mortar suspended by a piece of skin. It is most interesting that the so-called kettle-drum is a very late type among the many kinds of drums found in Africa.

534 In regard to the distribution of kettle-drums in Africa, Sachs says that they are found in Islamic
171 North Africa, in the Sudan, and in North-East Africa (Sachs 1929, p. 247). According to Wieschhoff
kettle-drums have a more limited distribution being found only in the Sudan and in North-East Africa
including Ethiopia (Wieschhoff 1933, p. 40, map 29e). As to the distribution of kettle-drums outside

of Africa, Sachs says that they occur mainly in Islamic West Asia from where they were recently in- 534
troduced to Europe and to India where terms for kettle-drums are derived from Arabic (Sachs 1923, 171
p. 58 ff.; 1929, p. 247). Wieschhoff admits that the kettle-drums seem to have been introduced into India with Islam, but he concludes that the distribution of them in the Sudan and in North-east Africa indicates that this element belongs to the so-called North Erytrean Culture (cf. Wieschhoff 1933, p. 40 ff., map 29e).

I do not want to advance any theory about the introduction of kettle-drums into Africa, but it 534
seems natural to consider the Tuareg drums known as *ettebel* as an Islamic trait. However we cannot 174
be sure that the use of drums as insignia of chiefs is post-Islamic, for, as we have seen, the drum as a royal insignia is pre-Islamic in many parts of Africa.

The theory that the drums used by Tuareg chiefs are Islamic seems to agree with the fact that the 643
custom of crowning chiefs among the Tuareg by means of a large turban or headcloth is no doubt 177
also an Arab practice. The use of a turban to crown or install kings and supreme chiefs is rare in Africa 171
south of the Sahara. The use of the turban for the kings of Dar Fur, Wadai, and Bornu is no doubt to be considered Islamic (cf. Schilde 1930, p. 68; Irstam 1944, p. 118), and there can also be little doubt that the use of a large turban at the installation of chiefs in Tibesti and Ennedi was originally introduced as a result of contact with the Arabs – particularly as this turban is known by the Arabic term *ḳadmul* (cf. Kronenberg 1958, p. 74 f.; Fuchs 1961, p. 52).

It is clear that Islam has greatly influenced Tuareg political organization. But we should also bear 174
in mind that North Africa in pre-Islamic times was influenced by various high cultures which are generally known as *Old Mediterranean* (*Syrtic*) and *Young Sudanese* (*North Erytrean*). It is very possible that the first noble Tuareg who penetrated into the Sahara with their camels came from a country situated towards the East or the North-east, and we have seen that the Ayr Tuareg have traditions about their origin in these quarters (cf. p. 412 ff.). It might therefore seem natural to assume that certain traits which are grouped under the vaguely-defined *Young Sudanese Culture* have been introduced into the Sahara with the immigration of the first noble Tuareg. Lhote thinks that the sandal type known as *takalmi* was perhaps introduced from Egypt with Tuareg immigrations from that country (Lhote 1950d, p. 531). We cannot know this, but it is possible that the oldest camel-breeding nomads introduced into the Sahara certain elements of the so-called *Young Sudanese Culture*.

TUAREG SLAVERY

It is very possible that the political system of the pastoral Tuareg has been greatly influenced by slavery 567
in the sense that slavery made the noble Tuareg less dependent on their vassals. Throughout the 19th 565
century slavery was important to fair-skinned pastoralists of all classes. In other respects it has had little effect on the changing political relations, for slaves do not constitute a class or a true caste; they are incorporated into Tuareg society on a kinship pattern.

Slavery is still extremely important in Ahaggar and in Tasilé-n-Ajjer where the French military 567
administration has done very little to abolish it. It is true that the slave-trade no longer exists, but 648

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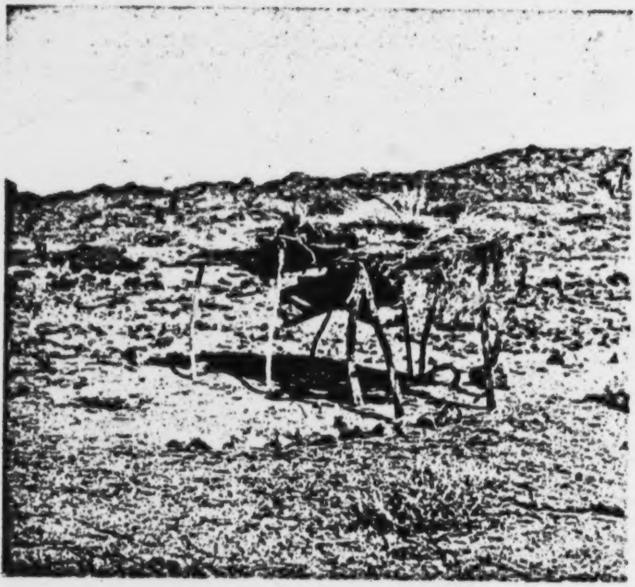

Fig. 290. Sun-shade built of branches and grass. It is the normal living quarters for slaves in Ahaggar and for a great part of the year it is more suitable to the climate than Tuareg skin tents. Ahaggar, the *Dag Ṛali* tribe.

567 military administrators have tacitly admitted that slavery continues as an established institution.
648 According to a census of 1949, there are in Ahaggar 1552 slaves owned by 3960 pastoral Tuareg (cf.
[162] Lhote 1955a, p. 224 ff.), and in two tribes the number of slaves exceeds that of fair-skinned Tuareg, namely in the *Dag Ṛali* and in the *Kel Ṛela*. Most Ahaggar Tuareg have a few slaves in their camps, while in Ayr very few fair-skinned pastoralists have slaves nowadays. The civil administration of Ayr has done much to secure the abolishment of slavery, and it seems as if many slaves were manumitted
567 after the 1917 revolt. Slavery is actually almost devoid of economic importance in Ayr, while in Ahaggar
[184] it plays a great part in the maintenance of the economic system based upon camel-breeding outside Ahaggar and on caravan-trading.

The structural position of slavery is apparently very much the same in Ahaggar and in Ayr. Slaves are their owners' property; they can no longer be traded, but even in pre-European days it was never usual to sell slaves from one's own camp. The slaves are still inherited within one and the same family, and until a few years ago it was the custom for a slave girl to form part of the bride-wealth. Despite everything this may perhaps be taken as an indication that slaves are not conspicuously well treated, and there are also examples of the corporal punishment of slaves. This may occur even to-day, the rule being that certain misdemeanours, for which the light-skinned Tuareg atone by paying a fine of domestic animals, may be punished in the case of slaves by a flogging on the order of senior chiefs.

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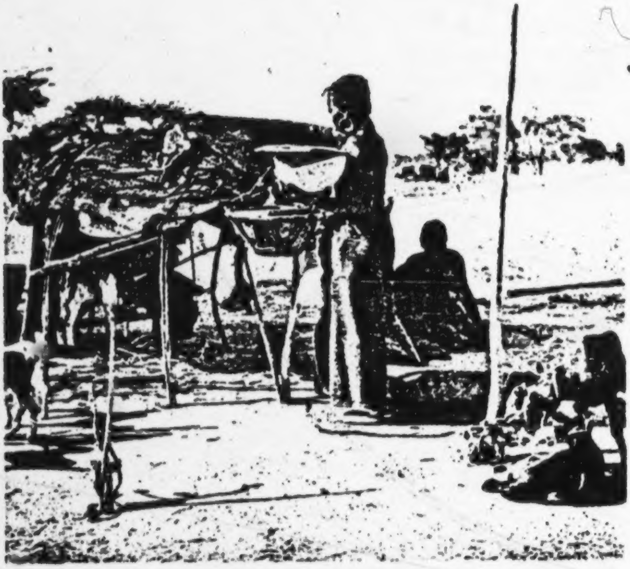

Fig. 291. Sun-shade built by slaves in Ayr on the same principle as the mat tents previously mentioned. The standing slave girl only wears a cotton skirt which sometimes in the south forms the sole dress of women. Ayr, the *Irawatten* tribe.

It is, however, rare for a slave to be punished in this way by his own master. Throughout the time I 567 have lived among the Tuareg I have, for example, only noted two instances of corporal punishment, and both in a very mild form. It is also very normal in vassal camps for slave children and Tuareg children to play together, and a slave owner may treat his slave children in much the same way as his own.

There are several reasons why the Tuareg, practically speaking, never punish their slaves, and a very interesting custom may here be adduced. For if a slave is badly treated, he has always the recourse of changing masters by means of a system which is still in operation to this day. In Ahaggar the way thereby a slave can obtain his freedom from his master and become attached to another Tuareg is as follows:— When he sees a riding camel belonging to a Tuareg whose slave he wishes to be, he runs up to it and cuts a piece from one of its ears. In consequence of this the owner of the camel is obliged to take possession of the slave, whose actual and original owner can no longer make any claim to recover him. This custom may appear remarkable, but it is in fact a symbolic action with a deeper significance: to cut a piece from the ear of another man's camel is to damage it, and a Tuareg is responsible for the actions of his slaves. The "guilty" slave therefore falls to the lot of the owner of the camel as "compensation" for the "damage" done to his beast, and the original owner of the slave is bound to agree to this. It is an extreme loss of prestige for a Tuareg to lose his slave in this way, [558] and is a great mark of honour for the new master, who will receive his slave with favour and give him

567 clothes and a camel with saddle; there will thus be an excellent relationship between master and slave. This method of cutting the ear of another man's riding camel to become his slave is also known to have been practised in Ayr. However, the *Kel Ferwan* Tuareg say that among them a slave who wanted to become attached to another master would rather cut a slight slit in the ear of one of that man's children. The slave would thus become attached to the father of the "wounded" child.

In cases where a slave simply runs away, his master will always demand his return. But in Áhaggar, the senior chieftain, the *Amenukal*, may intervene on behalf of the slave if he learns that the runaway slave has been badly treated or is badly clothed. There are thus certain rules which serve to promote reasonably good conditions for the slaves. However, only under exceptional circumstances do they eat with their masters, and they normally live, not in tents, but in open windscreens or shades from the sun. In general, though, there is little difference between the way of life of the Tuareg and their slaves, and they wear fairly similar clothes and ornaments. The slaves also bear weapons, and in the old days, when camel-raiding and warfare formed, as it were, a part of the Tuareg economy, they often accompanied their masters on raids. If a Tuareg family owns a sufficiently large number of slaves they will often not only carry out much of the heavier household work but will also watch over the flocks and herds; and as herdsmen they often have a position of considerable influence, as they are better acquainted with the care of the various types of animals than are the Tuareg themselves. To [422] all this may be added a custom of particular interest. Among the fair-skinned Tuareg each tribe owns a particular portion of a beast so that from a slaughtered beast one tribe is entitled to a portion of the back, another to the heart, a third to the liver, and so on. The slaves have similar rights in such cases, being entitled to the neck and in some regions also to the tail and the feet. When a beast is slaughtered these portions must always be given to the slaves.

The slaves are thus not completely without rights. Nevertheless the ordinary rules of inheritance do not apply to them. If a slave is on good terms with his master, the latter will, in the course of years, give him a certain number of goats as his personal possession – which he may, for example, slaughter or sell as he wishes. But when a slave dies his children cannot inherit his flocks or any other of his possessions. Everything then will become the property of his master.

567 608 This is in agreement with the fact that slavery is organized upon a kinship pattern in the way that slaves are normally the fictive children of their master, a man being the "father" of his slaves, while a female slave-owner will be their "mother", for slaves are always owned individually by pastoral Tuareg, and though the men are perhaps more frequently slave-owners than are women, slaves may be owned by pastoralists of both sexes. This position of slaves as "children" of the slave-owner means that the owner's brothers, sisters and parents are considered a kind of "parent" by his slaves. This again results in young slaves being considered a kind of "brother and sister" to the slave-owner's children and those of relatives of the slave-owner's generation. The organization of slavery on a kinship pattern can be demonstrated by means of the following examples:—

[583] (1) When a young slave marries it is the duty of the slave-owner as his "father" to pay the necessary amount of bride-wealth which will comprise a few goats – normally three to five animals – and this bride-wealth goes to the owner of the slave girl with whom the slave marries. A Tuareg women will as a slave-owner make and receive the payments connected with the marriages of her individual slaves in the same way as a male Tuareg slave-owner.

[text continues on p. 444]

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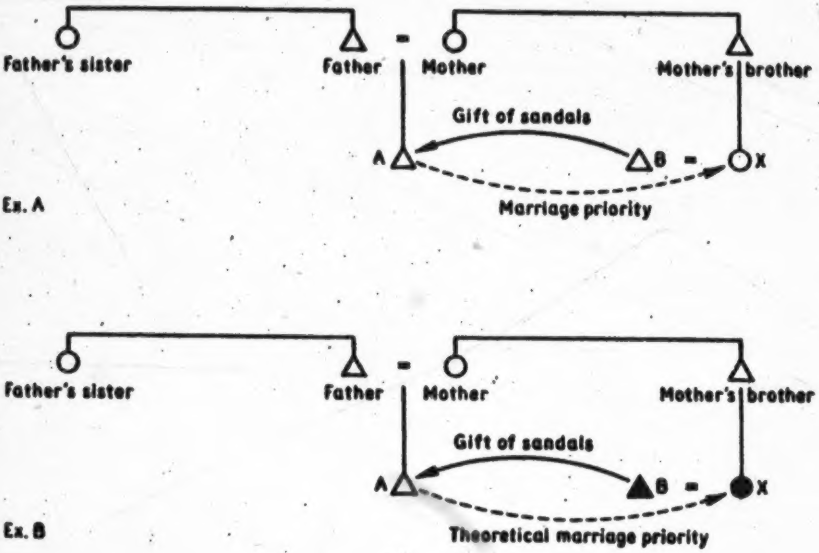
Father's sister
Father
=
Mother
Mother's brother
Gift of sandals
A
B
=
X
Ex. A
Marriage priority
Father's sister
Father
=
Mother
Mother's brother
Gift of sandals
A
B
=
X
Ex. B
Theoretical marriage priority

Fig. 292. Diagram illustrating how Tuareg slavery in Ahaggar is based upon kinship structure.

Ex. A. The Tuareg A has a sort of first-priority to marriage with his mother's brother's daughter X, who, however, marries B, who has no especial right to marry X. During the marriage ceremony B or one of his brothers must thus give a pair of sandals to A.

Ex. B. The slave-girl X belongs to A's mother's brother and is the latter's fictive daughter; she is therefore regarded as A's mother's brother's daughter, and A accordingly has first-priority to marriage with X. As a slave-girl, however, X will marry the slave B, but A will receive the gift of sandals, just as though X were his actual mother's brother's daughter.

567 608 in the same way as a male Tuareg slave-owner. When a slave marries a slave girl the latter becomes the daughter-in-law of her husband's owner, and there will consequently be a kind of avoidance between these persons as between other relatives-in-law of different generations. In connection with slave-marriages it is of some interest to mention the following custom practised among the Tuareg of Ahaggar:—

[582] [431] Among the Tuareg of Ahaggar a man has a certain marriage priority to his mother's brother's daughter according to rules which are outlined in the next chapter (p. 458 ff.). Therefore when a Tuareg's mother's brother's daughter marries somebody else the first man vill be entitled to a pair of sandals from the groom. In agreement with this custom a slave when marrying a slave-girl must give a pair of sandals to his wife's owner's ("father's") sister's son as explained in the diagram above (Fig. 292).

(2) The husband in a Tuareg pastoral family stands in the relationship of "father-in-law" (*adeggal*) to all slaves owned by his wife, while the wife is the "mother-in-law" (*tadeggalt*) of all slaves owned by her husband. Between these fictive relatives-in-law there is institutional avoidance which, however, is far less strictly observed than for true relatives by marriage of different generations. Owing to these rules a man must not or should not marry a slave girl owned by his divorced or deceased wife, just as it would be improper to marry a daughter-in-law.

(3) It is not forbidden for a man to marry a slave-girl whom he owns, even though she is considered his "daughter". This does not disagree with ordinary kinship-rules for a man is permitted to marry some of his classificatory daughters. If a man marries his own slave girl his children, among the Ayr Tuareg, would not be considered *Ichardanen* or *Iburelliten*, that is "mulattoes". They have the right to be considered true Tuareg or *Imajeren*, but in case of disagreements between a Tuareg of this type, and other people, they will call him by one of the terms used for "mulattoes", and may even call him "slave". If a man marries a slave girl who does not belong to him, his children of that marriage will [583] not become true Tuareg. But a Tuareg who wishes to marry a woman of slave status or a mulatto will attempt to secure the acknowledgment of his wife and her children as true Tuareg by the payment of a high bride-price. Thus a Tuareg of Ahaggar who married a mulatto girl gave for bride-wealth seven camels as is customary for noble Tuareg in the two northern groups, though the price according 554 to traditional rules should not exceed the value of one camel. It must be added that the position in Tuareg society of people who are not true Tuareg by origin depends greatly upon personal qualities. If a man is wise, rich, and generous, or if he is a marabut, all Tuareg will be ready to associate with him on equal terms even though he be predominantly negroid. I have noted several examples of this, and once met a very negroid nomad who was greatly respected by all Tuareg because he had once [564] [567] killed seven goats in one day to entertain foreign guests. There are certain classes and castes in Tuareg society. Formally it seems comparatively easy for children of mixed marriages of Tuareg and slaves to be considered Tuareg as slaves have a social position different from that of true black-skinned castes.

567 608 (4) If a slave woman has suckled a Tuareg girl or has taken a little fair-skinned Tuareg girl to her as her own, she will be recognized as the girl's true mother. And if the slave woman has children of her own they will be recognized as brothers and sisters of the little Tuareg girl. When the Tuareg girl later marries, her husband will be considered the true son-inlaw of her slave-mother and there will

be a very strict avoidance relationship between them. However, the slave-mother has no right to 567
inherit (*tekachit*) the livestock left on the death of her Tuareg daughter, but a certain amount of stock 608
will be given her under the designation of *elhaḳḳ*. The Tuareg girl will not inherit her slave-mother, nor will she have the right to a number of her animals.

The above examples indicate the main structural features of Tuareg slavery. Most important among them is the position of slaves as children of their masters, though it should be stated that the rules of
behaviour between owner and slaves are not necessarily like those valid for parents and children. A 567
young slave owner will not be rough with his old slaves, but will generally behave very kindly towards them, refraining from giving them orders in the way he would command his younger slaves. Age distinctions play a great rôle in relationships between Tuareg and their slaves, and a description of Tuareg slavery should not only outline its structure but also underline the fact that we cannot establish very fixed rules for the relationship between Tuareg and slaves, as it varies very much with individuals. Some slave-owners treat their very young slaves almost like their own children, while other slave-owners do not. Some Tuareg are constantly talking disparagingly about their slaves while outwardly appearing to be very kind to them. There are many facets of Tuareg slavery.

The position of slaves as children of their owners causes slaves to belong not only to particular 567
families and family groups, but also to tribes and, in a certain sense, even to classes. I have often noticed 614
this in Ahaggar where tribes within the same class frequently have an attitude towards each other which is described by the Tuareg word *inmeñhaṛen*, that is "to have a feeling of envy or jealousy towards somebody". *Inmeñhaṛen* is rather an attitude of reserve and outward respect than a kind of avoidance. People of tribes or sub-tribes which have *inmeñhaṛen* relationships to one another will not visit each others' camps except on certain occasions when dressed in their best clothes, and they will then behave with the uttermost reservation and respect to each other. If two tribes have such a relationship to one another, it will normally also comprise their slaves, who will behave towards each other in the same fashion. If on the other hand two tribes have institutional joking with one another, as is the case with certain vassal tribes in relation to tribes of the *Iseḳḳemaren* class, there will also be joking between their slaves. There seems to be a strong tendency for the slaves to behave towards each other in a manner corresponding to that of their master.

In spite of the kinship pattern on which the relationships of Tuareg slaves and slave-owners is based, 567
it is most noteworthy that there is always latent joking between them, as there is between many different 571
classes and castes in Tuareg society. On certain occasions a Tuareg slave owner will joke freely even with his young or older slaves, though he will never joke with his children who have to show their father the outmost respect (cf. p. 454). Such a joking relationship is still more common between Tuareg and slaves who are not attached to one another by possession bonds. But it never exists between Tuareg and slaves who are not already known to each other.

The noble Tuareg may also joke with slaves but seem less inclined to do so than Tuareg of other 565
classes. Apart from that, the relationship between noble Tuareg and slaves does not deviate from the 567
description presented above. Noble Tuareg can marry slave women though they cannot easily marry 64
Tuareg women of the vassal class. This may seem rather strange, but is in fact not so unusual as it might seem. We have stated above (p. 429 f.) that the reason why noble Tuareg and vassals could not

565 easily intermarry was to be looked for in the structure of the political system based upon the division
567 of society into noble and vassal classes. A marriage between nobles and vassals would apparently tend
64 to break down the political structure, but this would not be the case with a marriage between a noble
Tuareg and a slave woman, for slaves are attached to the tribe of their masters as their "children"
and play no part in political structure. Furthermore, if a noble Tuareg marries a slave-girl belonging
to him, their children will also be able to adopt a noble status.

Diffusion and Function in Social Organization

T 121

The problems connected with diffusion of so-called social traits have been only superficially studied by anthropologists, who hold very different views about this matter. Thus Murdock stresses that "the forms of social organization seem singularly impervious to diffusion" and that "traits of social structure appear to be borrowed, in general, only under conditions in which the same traits would be independently elaborated even in the absence of culture contacts" (Murdock 1949, p. 196). This extreme view is that adopted by some anthropologists, while other scholars agree with Lowie that diffusion has played a large part in the distribution of traits of social organization (Lowie 1950, p. 261; 1953, p. 421 f.).

It is often stated in anthropological literature that there is not necessarily any functional connection between a particular type of social organization and a particular type of economic culture. This was shown very clearly by Wissler for the American Indians (cf. Wissler 1922). In regard to Northern Africa we have a type of patrilineal social organization which is shared by all Arabs, whether settled agriculturists or true nomads, and we have another type of social organization among Tuareg-speaking pastoralists and agriculturists. Arab and Tuareg pastoralists have largely the same type of economy, but differ much in social organization. The same holds for Arab and Tuareg agriculturists.

B 613 [114]

I have never studied Arab social organization in great detail. The patrilineages of North African Arab pastoralists have been brilliantly described by Evans-Pritchard in regard to the bedouins of Cyrenaica (Evans-Pritchard 1949), and the Arab bedouins I have visited (e.g., *Ulad Ba Ḥammu*, *Chamba*, *Larba*, *Ulad Nail*) apparently have lineage-systems of much the same type. The *Ulad Ba Ḥammu* tribe falls into four maximal patrilineages which again divide into lesser patrilineal units. An Arab is named after an ancestor of a minor patrilineage of his tribe and by an individual name. When he writes his name the ancestral name comes first. A *Chamba* Arab I knew well was named *Ben Hadid Sayah*. *Sayah* was his personal name while *Ben Hadid* ("son of *Hadid*") referred to the ancestor of his patrilineage with a depth of five generations.

B 601

It seems as if Arab kinship terminology is of very much the same type throughout North Africa. I have taken down the systems used among the *Ulad Ba Ḥammu* and the *Chamba*, and they appear to be identical apart from dialectical distinctions. The systems are characterized by a preference for descriptive terms. Those for "father" and "mother" are not used for kinsmen other than the true parents, though a father's brother may be called "father" if the true father has died. There is a term for "grandfather" and "grandmother" which can be used for all grandparents, while kinsmen of lower generations are known by descriptive terms so that it is always clear whether a kinsman belongs to

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25
Bedouin MJ4
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B 601 the father's or the mother's family. Should a man's father have married into his own patrilineage the mother's patrilineal family, however, is generally referred to by the terms given to paternal relatives.

B 602 Kinship behaviour is characterized by a respect-relationship towards older generations. There is also a kind of avoidance between certain in-laws known as *nsib* (male) or *nsiba* (female). The avoided relatives in-law are the following:— father-in-law, mother-in-law, son-in-law, daughter-in-law, younger brother's wife, younger sister's husband, older brother of spouse, older sister of spouse. Other in-laws known as *ḥamm* (male) or *ḥamma* (female) are not avoided; these are:— older sister's husband, younger brother of spouse, older brother's wife, younger sister of a spouse (cf. Miner 1953, p. 146). When B 582 the levirate is practised a wife can marry a younger brother of her deceased husband, but not his elder brother, just as in the case of the sororate a man can marry a younger sister of his deceased wife but not her elder sister. Thus marriage between persons of the same generation is not permitted should there already be an established avoidance relationship between them. People involved in an avoidance relationship cannot marry.

B 582 584 An interesting and much discussed trait of Arab social organization is preferential marriage with a father's brother's daughter. Most Arabs I have questioned claimed her to be the most suitable spouse, but they also said that for various reasons other types of marriage frequently took place. It might happen, for example, that marriage of this preferential type was not contracted because of conflict between the two families in question. But the factor which frequently leads to marriages of types other than that with a father's brother's daughter seems to be the following:— In an Arab family, the father has the decisive, final word in choosing spouses for his children. The children when contracting a first marriage are forced to marry the persons chosen by their father. Even so, however, the choice is frequently the result of the mother's initiative for she knows the young girls far better than does her husband. She is able to visit them, can talk freely to them, and she knows their characters and their abilities. A husband will therefore often give way to his wife's wishes even if she chooses a maternal cousin or some girl other than the father's brother's daughter.

B 582 I have already mentioned certain relatives with whom marriage is forbidden when the levirate and the sororate are practised. There are many other kinswomen whom a man is not allowed to marry, namely:— all kinswomen of the parents' and the grandparents' generations, brother's daughter, brother's daughter's daughter, brother's son's daughter, sister, sister's daughter, sister's daughter's daughter, sister's son's daughter.

A T 177 The Arabs I know best are those who live in Tuareg country, and some of them have been much influenced by Tuareg social customs. Many of these Arabs are bi-lingual, speaking of their kinsmen both in Arabic and in Tuareg. Sometimes they seem to be in doubt whether it is better to marry a father's brother's daughter than a cross-cousin. The *Ahl Azzi* Arabs, who lead a pastoral life in Ahaggar and are much mixed with the Tuareg, pay bride-wealth like the vassal Tuareg tribes, but this is not so with *Ahl Azzi* Arabs who are sedentary and live at Tamanṛaset. These sedentary Arabs never give camels for bride-wealth, but instead certain articles of dress and ornaments, the price of which is about 25,000 French francs, equivalent in value to a camel. A less comprehensive dowry is given by the bride's father. The food expenses connected with a marriage are paid in part by the groom or his father, and in part by the bride's father. The sedentary agriculturists, the *Ḥarratin* (*Izeggaṛen*),

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25
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A 177

pay bride-wealth like sedentary Arabs or pastoral Tuareg, but should they not pay bride-wealth in animals like pastoral Tuareg but follow the custom of sedentary Arabs, they generally pay less than the Arabs. The *Ḥarratin*, who have Arabic as their mother tongue, generally follow the Arab rules of social organization, while negroid agriculturists, who descend from Tuareg slaves and speak Tuareg, practise the rules of the Tuareg social system.

T 601

Tuareg kinship systems differ radically from the Arab system just mentioned. The Tuareg have many descriptive terms for relatives, but these are also grouped together under very few terms in classificatory systems which are somewhat different in the various Tuareg groups. However, it seems to be a main characteristic of most true Tuareg kinship systems that there are distinctive terms for cross-cousins and parallel cousins. Here I describe in some detail the kinship systems of the Ahaggar Tuareg and the *Kel Ferwan* Tuareg of Ayr.

AHAGGAR

Most relatives of ascending generations are known as "father" (*abba*) and "mother" (*anna*). But there is a particular term for "mother's brother" (*añet ma*), which is also used for certain other relatives of the mother's family, particularly for persons who are related to Ego in the maternal line. Thus the term *añet ma* is used for mother's mother's brother, for mother's mother's sister's son, and also for any older relatives matrilineally related to Ego, e.g., mother's mother's mother's mother's sister's daughter's son. Two relatives of the mother's family are not necessarily matrilineally related to Ego, but are nevertheless termed *añet ma*, namely mother's mother's brother's son and mother's father's brother's son.

Relatives of Ego's own generation are known as "brothers and sisters", or as cross-cousins. Brothers and sisters can be referred to as *añaten* (sing. *aña*) and *tañatin* (sing. *welet ma*), but these terms are used mainly for composed descriptive terms, e.g., *aña n ti s em ma*, that is "mother's father's brother". Speaking of brothers and sisters the Ahaggar Tuareg will generally use terms which refer to age. There are terms for "elder brother" (*ameḳḳar*) and "younger brother" (*ameḍray*), and similar terms for "elder sister" (*tameḳḳart*) and "younger sister" (*tameḍrayt*). These terms are also used for true and distant parallel cousins, but the true age distinctions are then not the basis of terminology. If Ego's father's brother is older than Ego's father, father's brother's children will be "elder brothers and elder sisters" to Ego. Similarly, mother's sister's children will be "elder brothers and sisters" to Ego if their mother is older than Ego's mother. Distant parallel cousins are known as elder or younger brothers and sisters according to the same principle, the difference in age between grandparents determining whether they should be classified as "elder" or "younger". For true and distant parallel cousins there are additional terms which do not refer to age:— All true and distant parallel cousins of the mother's family are known as *ara n tañatin* ("children of sisters") or as *ara n teḍiḍen* ("children of women"), while true and distant parallel cousins of the father's family are called *ara n añaten* ("children of brothers") or *ara n midden* ("children of men").

Relatives of Ego's own generation who are not brothers or sisters are cross-cousins. Male cross-cousins are termed *ibubah* (sing. *ababah*) while female cross-cousins are known as *tibubah* (sing. *tababaht*). Cross-cousins comprise not only children of father's sisters and children of mother's

[text continues on p. 452]

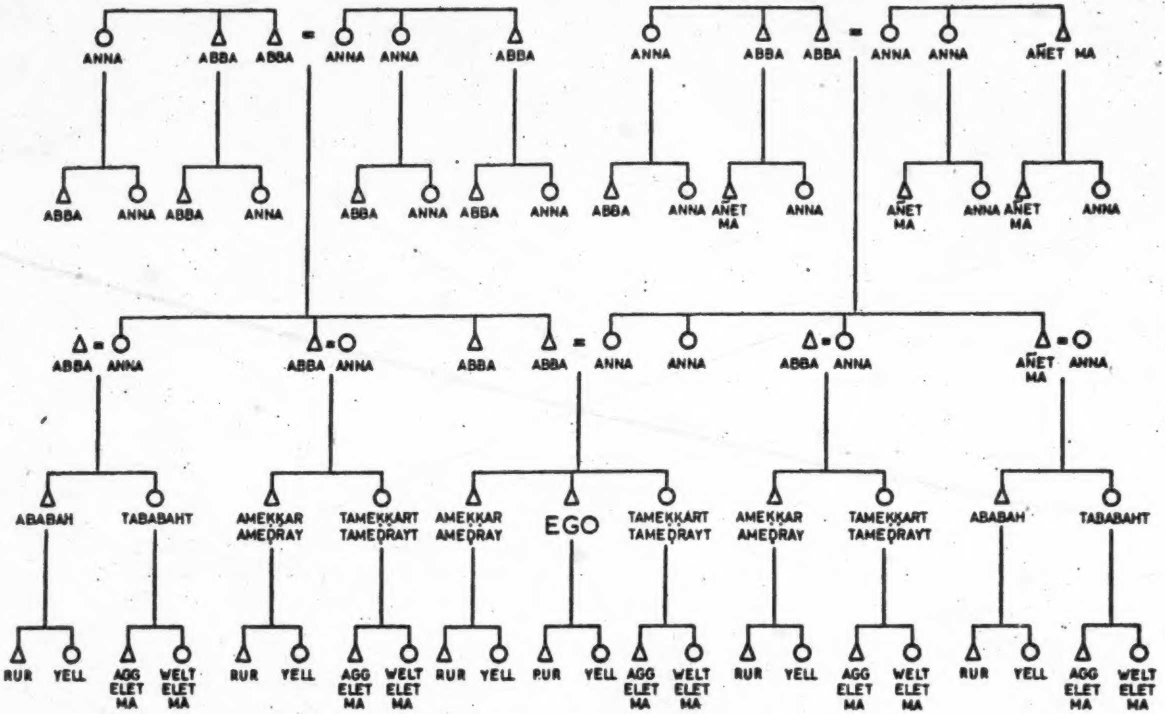
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Fig. 293. The kinship system of the Ahaggar Tuareg for Ego male. For Ego female all relatives of descendent generations are "children".

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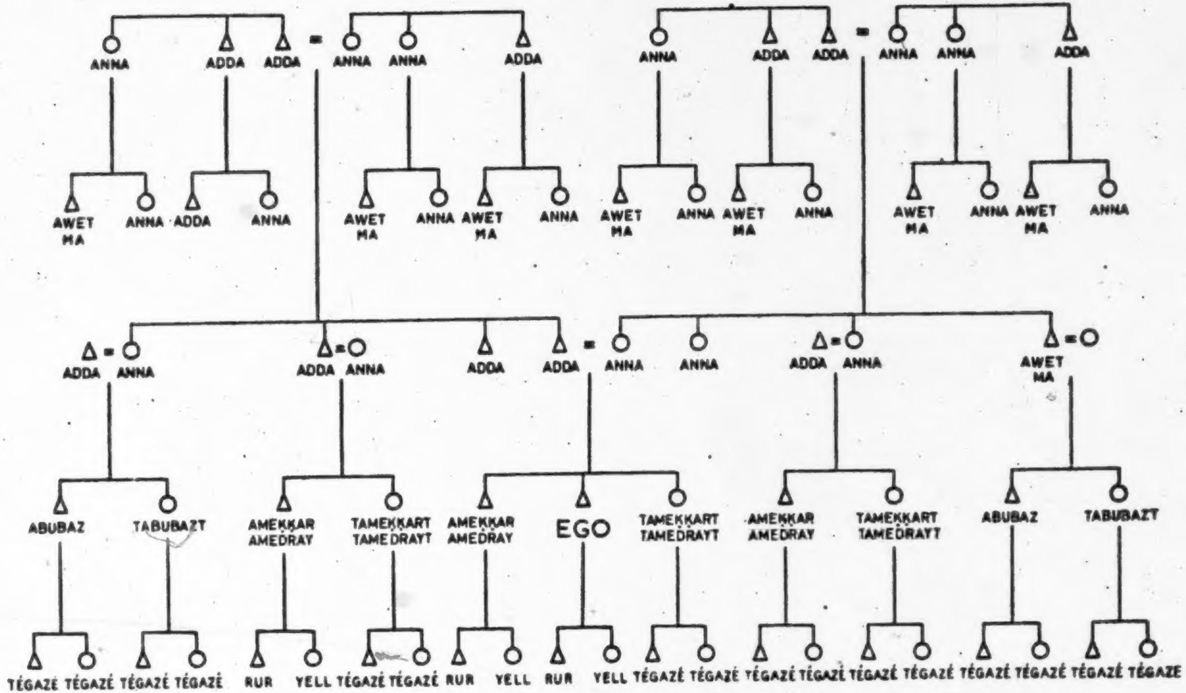
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Fig. 294. The kinship system of the *Kel Ferwan* Tuareg (Ayr) for Ego male. All relatives of descendent generations are "children" to Ego female.

601 brothers, but also all children of father's female cousins and all children of mother's male counsins.

For descending generations kinship terms are different for Ego male and Ego female. Ego male will call all children of his sisters and all children of his female cousins *agg elet ma* ("sister's son") or *welt elet ma* ("sister's daughter"), while all children of his brothers and all children of his male cousins will be called *rur* ("son") or *yell* ("daughter"). Descendants of persons known as *rur* (*yell*) are known as *rur* (*yell*), descendants of persons known as *agg elet ma* (*welt elet ma*) as *agg elet ma* (*welt elet ma*). Ego female has no "sister's children" but will call all relatives of descending generations *rur* ("son") or *yell* ("daughter"). – Collectively all relatives of the second descending generation are known as *iheyawen* (sing. *ahaya*) or *tiheyawin* (sing. *tahayawt*). This term can be used for descendants of more distant generations as indicated by the tribal name *Iheyawen Hada*, that is "descendants of *Hada*".

AYR

[184] There are at least two distinct kinship systems in Ayr, both of which differ from that described above in the case of Ahaggar.

[171] The *Kel Ewey* Tuareg have a system related to that of the Hausa-speaking population of Agadez and further south. In *Kel Ewey* the terms for "brothers" and "sisters" are never used classificatorily. All parallel cousins and cross-cousins are known as *ibubazen* (sing. *abubaz*; fem. *tabubazt*), and children of all cousins are known as *tégazé*, which is used both for males and females. The *Kel Ewey*, in contrast to other Tuareg, do not make any distinction between parallel cousins and cross-cousins. As far as my knowledge goes all this applies only to the true *Kel Ewey* and not for such Tuareg groups as the *Kel Tamat* and the *Ikezkezen* who are politically attached to the *Kel Ewey*.

The kinship system of the *Kel Ferwan* Tuareg comes close to the system of the Ahaggar Tuareg, but the two systems are not identical. The word *anna* ("mother") is used for all female relatives of ascending generations and also for spouses of such relatives, who are called *adda* ("father"). The term for "father" (*adda*) is applied to all grandfathers whether they are patrilineally or matrilineally related to Ego, to father's brothers, and to the husbands of father's sisters and mother's sisters. It is also applied to father's father's sons but not to other male cousins of Ego's father and mother, for all other male cousins of father and mother are termed *awet ma*, the word employed for "mother's brother". Thus the term *awet ma* is used for true mother's brothers and for most male relatives of the parents' generation, while it is never used for matrilineal kinsmen of the second ascending generation. The wives of all males termed *awet ma* are known as *tamtet n awet ma* ("mother's brother's wife") and not as *anna* ("mother").

The Kel Ferwan Tuareg do not use the term *aña* (pl. *añaten*) and welet ma (pl. *tañatin*) for brothers and sisters. When they talk about brothers and sisters without reference to age they use the terms for younger brother (*amedray*, pl. *imedrayen*) and younger sister (*tamedrayt*, pl. *timedrayin*). The term for "elder brother" and "elder sister" are identical with those used in Ahaggar, namely *ameḳḳar* and *tameḳḳart*. Parallel cousins are called "elder brother" ("younger brother") and "elder sister" ("younger sister") according to the same rule as in Ahaggar. Should their father or mother be older than Ego's father or mother, they are considered "elder brothers and sisters". Apart from true brothers and sisters and true parallel cousins, Ego has as "brothers" and "sisters" only the father's father's brothers' sons' children. Whether they should be termed "elder" or "younger" depends upon the difference in age of their grandfathers. These relatives, like the father's brothers' children, are sometimes called *araw n midden* ("children of men") while the term *araw n tedidin* is sometimes used for children of mother's sisters.

The Ayr Tuareg of the *Kel Ferwan* group have very few classificatory brothers and sisters. Children of the parents' cousins are cross-cousins with the exception of father's father's brothers' sons' children. In accordance with this we find that most relatives of the first descending generation are known to Ego male as "sister's son" or "sister's daughter" (*tégazé*), while Ego female will call all relatives of her first descending generation "son" (*rur*) or "daughter" (*yell*). She will also use these terms for all relatives of her second descending generation, while Ego male calls all children of *tégazé* relatives *égazé*. – Collectively, all relatives of the second descending generation are known to Ego male and female as *ayaw*.

Classificatory terms are used mainly for terms of reference and less frequently for address. However, grandparents and also their brothers and sisters are generally addressed "father" (*abba*, *adda*) and "mother" (*anna*). Many Tuareg also call their parents' brothers and sisters "father" and "mother", but personal names may also be employed when addressing these relatives, and are frequently used in the case of the parents' cousins. There is a common term of address which is used for all relatives of ascending generations if these relatives are much older than oneself. This term is *amṛar* (fem. *tamṛart*). It is a term of great respect and may be used to address parents-in-law (who rarely are addressed), and even for certain old people though they are not kinsmen. The word *amṛar* is further used as a title of a tribal chief. Kinsmen of one's own generation are generally called by name, though the term for cross-cousin is sometimes used to address cross-cousins in friendly conversation.

The words *ti* ("father") and *ma* ("mother") are not generally used for reference or address. They are employed mainly as descriptive terms, e.g., *ti s n ti s* ("his father's father"), *ma s n ti s* ("his father's mother").

Kinship terminology is different in Ahaggar and in Ayr but there are certain similarities which are even more remarkable for in-law terms. Both in Ayr and in Ahaggar brothers-in-law and sisters-in-law are known as *ilusan* (sing. *alegges*) and *tilusin* (sing. *taleggest*), and Tuareg of both groups recognize as such (1) all spouses of true and classificatory brothers and sisters, (2) all spouses of true and classificatory cross-cousins. The terms for parents-in-law and children-in-law are also identical for the two groups; a son-in-law or a father-in-law is called *aḍeggal* (*adeggal* in Ayr) (pl. *iḍulan*), while the feminine form *taḍeggalt* (*tadeggalt* in Ayr) (pl. *tiḍulin*) is used for a mother-in-law or a daughter-in-law. These terms are also used classificatorily and, strictly speaking, a person has as children-in-law the spouses of all relatives called children or sister's children. Consequently parents-in-law comprise all persons called "father", "mother", and "mother's brother" by the spouse.

The Tuareg speak about their kinship relations in terms of a man. They divide all their consanguineous kinsmen into three groups known by the Tuareg terms for "back", "stomach", and "side". The

601 Ahaggar Tuareg use the following terms for these three classes of kinsmen:— (1) *aruri* ("back") which term is used for relatives of the father's family its true meaning being a group of patrilineally related men; (2) *tésa* ("stomach") which is used for the mother's family with the correct meaning referring to a group of matrilineally related women; (3) *téğehé* ("side", correctly the place between the hips and the lower part of the chest). The proper meaning of this word is "persons descending from sisters and from their parallel female cousins in the maternal line", and is used to indicate the relationship between a man and his true and classificatory sisters' children. – The *Kel Ferwan* Tuareg of Ayr have similar terms with the same meaning:— (1) *aruri* ("back") for father's family; (2) *tédist* ("stomach") for mother's family – the word *tésa* in the Ayr dialect means "liver" and not stomach; (3) *tégazé* ("side") with the same meaning as *téğehé* in Ahaggar; the two words are identical, as the *ğ* in Ayr is always substituted with a *g*, the *h* frequently with a *z* or *j*. This word in Ayr is used to designate all true and classificatory sister's children, while the Ahaggar Tuareg refer to these relatives by the terms *agg elet ma* and *welt elet ma*. The term *égazé* used by the *Kel Ferwan* Tuareg for the children of true and classificatory sister's children is related to *tégazé*; it also refers to part of the side.

602 The Tuareg of Ahaggar and Ayr largely follow the same rules of kinship behaviour. These are outlined below:—

(1) Respect must be shown to all consanguineous relatives of ascending generations, that is respect towards all relatives termed "father", "mother", and "mother's brother".

(2) Respect must be shown to all persons known as "elder brothers" and "elder sisters". Rules of conduct towards such kinsmen are identical with those mentioned above towards kinsmen of ascending generations. Thus a younger brother on a journey with his elder brother will carry out all work as if he was with his father or another kinsman of ascending generations. When with his elder brother he must not talk about any matter referring to sexual life. He must not even talk too much about the copulation of domestic animals, and he should not mention such words as *imẓad* and *tindé* – names of musical instruments used at nightly gatherings which may be accompanied by love-making. A man must not ask his elder brother for a gift, but should ask for anything he wants through a third person. When he wishes to marry, the permission of his elder brother should be asked like that of the father and other older relatives. When the father dies the elder brother takes over his position of authority. The identical rules of conduct towards a father (or older relative) and an elder brother can be clearly [123] shown by the following example:— When I lived among the Tuareg I was incorporated in their kinship organization which is the rule for persons who have no relatives among the people they live among. Once I was attached as a younger brother to a man much older than myself. When travelling together among other Tuareg my "elder brother" was occasionally asked: "Are you his father?", and when replying:— "No, I am his elder brother", the questioner would sometimes add:— "Now, there is his father". For classificatory elder brothers (and sisters) the same rules are valid, even though in this case the "elder brother" may in fact be considerably younger than his "younger brother".

605 (3) There is a joking relationship (*tehanḍeẓẓit* in Ahaggar, *adélen* in Ayr) between all true and classificatory cross-cousins. This joking relationship allows free talk about sexual matters, and when cross-cousins tease each other they frequently refer to matters of sexual life, e.g., "You sleep with old slave women!", "You run after women like a donkey-stallion after a mare!" Teasing permits

any insolence, even the tearing away of a cross-cousin's veil in public. Insolence always incurs retali- 605
ation, and joking frequently gives rise to *tebbillant*, that is a sham-fight. A fight of this kind will normally end with the loosing part running away with something belonging to his cousin. He gives this back only if he feels like it, for cross-cousins are allowed to take each other's things. The same type of joking exists between brothers-in-law and sisters-in-law in Ahaggar and in Ayr.

(4) There is avoidance between parents-in-law and children-in-law in the way that a man avoids 606
very strictly his mothers-in-law, a woman very strictly her fathers-in-law. This rule of conduct is valid for all Tuareg of Ahaggar and Ayr. A man should not talk to his mother-in-law, and must never eat in her presence; he will avoid her tent, and if visiting her camp he will live at a distance of about one hundred metres from her. Similar rules hold for a woman and her father-in-law. Avoidance is less strictly observed between a man and his father-in-law, and there is generally very little avoidance between a woman and her daughter-in-law.

So far we have seen that the Tuareg of Ahaggar and the *Kel Ferwan* Tuareg of Ayr follow the same 602
rules of kinship behaviour. But there seems to be one important distinction between the two Tuareg 184
groups. For in Ayr there is an institutional joking relationship (*adélen*) with the wives of mother's 604
brothers including the spouses of the classificatory mother's brothers. This type of joking is similar to that of cross-cousins. The initiative for joking is taken by the mother's brother's wife who begins to tease her husband's sisters' children even when they are babies. The little children soon learn to retaliate and they quickly become those who take the initiative in joking and teasing. – I do not believe that this type of joking with a mother's brother's wife is practised in Ahaggar. It has been denied by informants, but it may perhaps be practised by members of certain tribes which originate in Ayr wherefrom they have immigrated to Ahaggar. Joking with a mother's brother's wife is also unknown in the *Ifoγas* tribes of the *Kel Ferwan* drum-group. These tribes arrived in Ayr about a hundred years ago from Adγaγ of the Ifoγas, where Tuareg have no joking relationship with a mother's brother's wife.

(5) We should mention as a characteristic of Tuareg kinship behaviour that it is considered the 602
right of a man to take domestic animals from particular kinsmen.

In Ahaggar a man can take animals from his father, his father's father, his true mother's brothers, from certain classificatory mother's brothers (mother's mother's sister's son; mother's mother's brother, and the latter's son), from his mother's father, who is not a classificatory mother's brother by name, but it is said that he is much like a mother's brother to the person in question. In addition, cross-cousins, as mentioned above, can take each other's property.

In Ayr it is said that apart from his right to take domestic animals from his cross-cousins a man can also take animals from his parents and his true mother's brothers, though not allowed to take them from any of his classificatory mother's brothers.

I have enquired particularly among the *Kel Ferwan* Tuareg of Ayr about this right to take animals from kinsmen. They said that if a man wants to take animals from a kinsman it is necessary for him to inform the "victim" about it through a third person shortly after he has done so. If he does not mention to somebody else that he has taken animals from one of his kinsmen, the act is considered a kind of ordinary theft. But if the "victim" is informed about the matter shortly after the animals have been taken, he can generally not complain about it, as this is considered very poor behaviour.

602 However, the Tuareg say, a man can complain in very extreme cases when sons or sister's sons constantly take animals from him. I have met several Tuareg who have lost many animals taken by sons and sister's sons. One Tuareg had lost seven camels, taken by his oldest son, who had sold them. The Tuareg was very annoyed about this but he had not complained about it directly to his son. The old drum-chief of the *Kel Ferwan* group was constantly complaining to me about his sisters' sons, who took his animals so that he could not leave so large a fortune to his son. He openly called his sisters' sons "thieves", but as far as I know he did not complain about it to them. I was also told in Ayr that the fact that a man could take animals from herds and flocks of his true mother's brothers would not normally lead to conflict between them. Some Ayr Tuareg said that they were as fond of their sisters' sons as they were of their own children. It can be added that if a man has taken many animals from a mother's brother the latter's son may perhaps be able to retaliate as he has the right to take belongings from this man, who is his cross-cousins.

(6) As the last characteristic of Tuareg kinship behaviour it may be mentioned that, among certain Tuareg of the *Kel Ferwan* group, it is normal for a man to inherit the kinship status of his parents on their death, in the way that he adopts their joking relationships with their classificatory cross-cousins, but he will never inherit a joking relationship with the true cross-cousins of his deceased father and mother.

The above-mentioned rules of kinship behaviour seem traditional to Tuareg social organization and very different from those considered valid among the Arabs. The social systems of Tuareg and

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Arabs are on the whole most disssimilar, but nevertheless the Arabs and the Tuareg of to-day have exactly the same rules of inheritance which follow Koranic law. It is evident that these rules have been introduced among the Tuareg owing to contact with the Arabs who brought Islam to North Africa. It is very difficult to determine when the Tuareg adopted Islamic inheritance rules, and also to learn about their pre-Islamic inheritance system.

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In regard to Tuareg rules of succession there can be no doubt that the matrilineal principle was originally recognized in all groups, but the patrilineal principle has been introduced into certain groups owing to Arab influence. The Tuareg who have adopted patrilineal succession are notably the two groups of *Iwllemmeden*, the *Kel Adrar*, and Tuareg of the *Ineslemen* class in various groups (cf. Nicolas 1950c, p. 492 f.; 1950a, p. 213). In fact we know that the *Iwlemmeden* adopted patrilineal succession as early as in the 17th century (cf. Richer 1924, p. 3, 52; Nicolas 1950a, p. 54 f.), and patrilineal succession is undoubtedly also of great age among the *Kel Adrar*, where the dominant tribes belong to the *Ineslemen* class. As to the two important groups of Southern Tuareg, the *Kel Ayr* and the *Kel Geres*, Nicolas states that succession among them is matrilineal, as it is in Ahaggar (Nicolas 1950c, p. 492 f.), and matrilineal succession is also mentioned as traditional to the Ayr Tuareg by Rodd (cf. Rodd 1926a, p. 151 f., 463 ff.). I have not been able to confirm these statements

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during my investigations among the *Kel Ayr* and the *Kel Geres*. All people questioned in these two groups claimed that the proper successor to chieftainship would be the deceased chief's son, though it was admitted among the Ayr Tuareg that a sister's son might be elected chief if considered better fitted for this position than a son. It would be correct to state that both the *Kel Ayr* and the *Kel Geres* to-day acknowledge the patrilineal principle of succession, but it is not quite certain when they

adopted this rule. There can be little doubt that it was introduced among them owing to contact 634
with other people, perhaps with the *Ineslemen* Tuareg. The *Kel Ayr* and the *Kel Geres*, like other 643
Tuareg, once in the past followed matrilineal rules of succession, for this is proved by history and
tradition.

It is frequently stated in the literature on various Tuareg groups that the sister's son is the 175
first in the line of succession. As early as Ibn Batutah it is mentioned that among a Southern Tuareg 634
people known as *Mesufa* a man was inherited by his sister's son, and he also states that the Sultan 643
of Tecadda (possibly Tegidda-n-edrar immediately south of the Ayr Massif) was succeeded by his
sister's son (Ibn Batutah IV, p. 388, 443). Rodd states concerning Ayr that the deceased chief's sister's
son is the first in line, and refers to the fact that this rule has often been followed at the election of
sultans (Rodd 1926a, p. 151 f., 463 ff.). According to Barth, a sister's son was preferred as chief in
Ayr and in Tasilé-n-Ajjer (Barth 1857–58, I, p. 374 f.). In the case of the Tuareg of Ghat (Ṛat) (Tasilé-n-Ajjer), Richardson states that the chiefs and sultans are succeeded by their sister's sons (Richardson
1848, II, p. 65 f.), and for the Northern Tuareg in general we have Duveyrier's statement that this
principle was valid not only for succession to chieftainship, but also for rights to blood-wealth, which
should be given to a slain man's sister's son. It is very remarkable that Duveyrier also relates in detail
a Tuareg myth about the origin of the sister's son's right to succession (Duveyrier 1864, p. 356, 397 ff.).
Again, we find that among the Tuareg of Ahnet (the Ahaggar Tuareg), a chief should be succeeded
by his full brother or a maternal half-brother, and then by his sister's son (Bissuel 1888, p. 23). Most 428
Iwllemmeden Tuareg have long ago adopted patrilineal succession and Ḳoranic rules of inheritance,
but matrilineal traits are found in certain tribes of the *Kel Ataram* group. Gaalon states that the Tuareg
of the Cercle de Dori (within the Niger Bend) even follow matrilineal rules of inheritance in the way
that a deceased man's sister's son comes first in the line of inheritors. A woman will not generally
possess any big fortune – apart from the dowry which on her death goes back to her parents or their
family (Gaalon 1939, p. 232). An interesting matrilineal custom is also mentioned from the *Kel Ataram*
by Feral. He states that property considered indivisible is still inherited by a sister's son in certain
vassal tribes around Gao (Feral 1955, p. 21 f.). During my visit to camps of *Bélla* and noble Tuareg
near Ayoru on the Niger I was also able to collect evidence to the existence of matrilineal traits in
the *Kel Ataram* group. *Bélla* men informed me that a powerful sister's son among the *Imṛad* or vassal
tribes would be able to inherit his mother's brother, and noble Tuareg of the *Kel Tahabanat* tribe
claimed that vassals even to-day practise matrilineal inheritance the sister's son being the intestate
successor. But all other pastoralists in the region of Ayoru but the vassals follow patrilineal rules of
succession and Ḳoranic rules of inheritance.

We see that a sister's son even to-day may have inheritance rights among the South-western Tuareg, 634
and the sister's son's right of succession is confirmed by many authors for several Tuareg groups. 643
However, there are also in literature statements that a sister's son comes next to a maternal cousin
in the line of succession. This is claimed in the case of the Ahaggar Tuareg by Benhazera (Benhazera
1908, p. 51, 97 f.), by Foucauld (Foucauld 1951–52, I, p. 152 f., II, p. 916 f.), and by Lhote, who
refers to Benhazera's statement (Lhote 1955, p. 189). Furthermore, Dubief has explicitly stated that
the priority of maternal cousins is acknowledged by the Tuareg of Tasilé-n-Ajjer (Dubief 1956, p. 89), and

634 Nicolas says that a maternal cousin is the first in line of succession, not only among the Northern Tuareg,
643 but also among the *Kel Ayr* and the *Kel Geres* (Nicolas 1950c, p. 492 f.). This, however, is not correct.
[114] I have been told by many Tuareg in Ahaggar that a maternal cousin is the proper successor next
to a brother of the deceased chief, and genealogies seem to intimate that a maternal cousin has more frequently been elected chief than has a sister's son. Nevertheless, Ahaggar Tuareg, whom I consider extremely versed in traditional custom, claim the priority of a sister's son. In connection with Duveyrier's statement this makes me believe that the Northern Tuareg originally preferred sister's sons to succeed as chiefs, while preference to maternal cousins is a custom more recently adopted.

591 The rules of residence have been outlined in a previous chapter (cf. p. 142 ff.), and I have mentioned
768 that in Ahaggar residence is based upon both the patrilocal and the matrilocal principle as follows:—
586 A man remains with his father after marriage, but after his father's death he joins the camp of his
mother and her brothers to live with his matrilineal relatives. A woman after marriage moves to her husband's camp. At her husband's death she will return to her father's camp, and if her father be dead she will join the camp of her mother and her mother's brothers. In case of a divorced woman the same rule is observed, but the children of a divorced couple belong to the father, and stay in his camp as long as he is alive. After his death they belong to the camp where their mother lives. However, the Ahaggar Tuareg sometimes dispense with this rule in case husband and wife belong to different classes or castes (cf. p. 22). It may even happen that children of a dissolved marriage, where husband and wife come from the same class or caste, grow up with their mother – particularly if, when the divorce takes place, the children are so small that they need their mother's care. On the whole, however, the Ahaggar Tuareg follow the rules of residence indicated above, and we have already seen that these particular rules are strongly supported by the authority of the *Amenukal*. The same practise
[178] was perhaps once also followed by the Ayr Tuareg, but, as we have seen (p. 152 f.), in the *Kel Ferwan*
group there is nowadays a strong tendency for a man to remain with his patrilineal kinsmen after his father's death. The rules of residence do not play a very important part to the *Kel Ferwan* Tuareg nowadays. The political unit of the drum-group has very little practical value, economic and political relations between noble Tuareg and vassals have disappeared, and there are no land rights to which certain individuals succeed.

582 In the light of what has been said so far about Tuareg social organization, we shall now consider their traditional rules of marriage. Preferential marriage is that with a cross-cousin; the very best is to marry a mother's brother's daughter, but father's sister's daughter is also considered a suitable choice. An exchange of spouse between two family groups is considered most excellent. It is thus considered ideal for brothers of family A to marry sisters of family B, for brothers of family B to marry sisters of family A.

If Ego marries a classificatory cross-cousin it seems preferably for him to marry one of his mother's
[432] family. This is intimated by a custom connected with marriage in Ahaggar;— At the beginning of
the wedding ceremony a pair of sandals should be given to the man who does not marry the bride though traditionally possessing a sort of prior entitlement to do so. Such men are:— (1) the bride's father's sister's son; (2) the bride's father's mother's sister's daughter's son; (3) the bride's father's father's brother's daughter's son.

The custom of giving sandal gifts to a cross-cousin of the bride is unknown among the *Kel Ferwan* 582
Tuareg, who also claim that cross-cousin marriage and particularly that with a true mother's brother's daughter is the best type of marriage. But though they consider such marriages ideal they admit that some cross-cousin marriages will not last long. For closely related cross-cousins have frequently grown 586
up together, and it is said that such cousins when they have married sometimes agree to dissolve their marriage on the ground that they feel like brother and sister so that there is no mutual attraction or love between them. This is only one of many reasons for divorce which is extremely common in all tribes of Ahaggar and Ayr. Briggs' statement from the Ahaggar Tuareg that divorce is both unusual [114]
and generally frowned upon is absolutely untrue (Briggs 1959, p. 86).

According to the Tuareg there are many reasons why a man should preferably marry a cross-cousin 582
and ideally a mother's brother's daughter. Among the *Kel Ferwan* Tuareg I have collected the following arguments in favour of cross-cousin marriage:— (1) All people (that is, all Tuareg) descend from one and the same woman, and her sons and daughters consequently had to marry one another. Their offspring established cross-cousin marriage which has been the rule since then. (2) There are many stories told to confirm the contention that cross-cousin marriages are good, while other marriages are bad. There is, for example, the following legend:— Once upon a time the parents of a young Tuareg arranged for him to marry a cross-cousin. This Tuareg, however, was not in love with his cross-cousin but wanted to marry another woman with whom he had no kinship bonds. The result of all this was that he married both his cross-cousin and the other woman. After this it so happened that a heavy punishment was imposed on him by the Sultan. It could be atoned for in one of the following two ways: He could give all his livestock as a fine, or he could have one of his hands cut off. To make his choice he now asked his two wives whether they thought he should loose his hand or rather give away all his stock. The wife to whom he had no bonds of kinship considered that he should keep his animals and have his hand cut off, while his cross-cousin wife asked him to dispose of flock and herd to save his hand. He thus realized that it is best to marry a cross-cousin. (3) It is considered good to marry a cross-cousin because cross-cousins are always extremely good friends. (4) The institutional joking relationship between cross-cousins is considered an important institution in preventing conflicts between married partners. For though joking between two cross-cousins stops on marriage, the mere fact that there has once been joking between them prevents quarrels and adds to the stable relationship between husband and wife. (5) Cross-cousin marriage has an important economic function as it establishes a constant exchange of persons, goods, and livestock between two families.

The three latter arguments in favour of cross-cousin marriage are also supported by the Ahaggar Tuareg. These arguments are very important and will now be discussed in some detail. There is no 605
doubt at all that cross-cousins of both sexes are extremely good friends. They do not joke just to annoy each other, and when joking they laugh and feel very pleased. Cross-cousins who have not seen each other for a considerable time are always pleased to meet. When doing so after a long separation they may make jocular remarks and gestures, but they will also be very kind to each other. They frequently address each other heartily as "cross-cousin", and male cousins will walk around hand in hand, while a woman will do her outmost to please a visiting male cousin. She will serve him the best possible [533]
food, will mend his clothes, and she will play her violin for him. Joking goes with intimate friendship. 582

582 and the argument that cross-cousin marriage tends to prevent marital conflict is apparently a valid one. I return to his later, and now pass to the last argument that cross-cousin marriage possesses economic functions. To examine this point let us first consider the obligations of two families who intermarry.

ECONOMIC OBLIGATIONS ON MARRIAGE IN AHAGGAR

602 (a) *Obligations of the groom and his family.*

583 (1) bride-wealth (*taggalt*) which varies according to the social class of the bride. For a noble woman and a woman of the *Ireǧenaten* tribe it is seven camels, while in most vassal tribes including the *Iseḳḳemaren* bride-wealth comprises only one young camel (*alegges*). In the *Dag Ṛali* tribe however two young camels constitute the traditional bride-price, while three camels are given at the marriage of a woman of the *Ibettenaten* tribe. In vassal tribes 25–30 goats can be given instead of one young camel. Bride-wealth is handed over to the bride's father, or, if the father is dead, normally to her elder brother. Bride-wealth animals belong to her father (or elder brother), but it is said that the offspring of bride-wealth animals should be given to the bride or to her children. On a man's first marriage bride-wealth animals are usually given by his father, but if he is divorced and wishes to remarry he will himself furnish the bride-wealth.

585 (2) a camel or a number of goats to be killed for wedding-food (*tardest*). In addition to what is given by the husband or his father, animals to be killed at a wedding may also be brought by visiting relatives.

(3) In noble tribes and among the *Ireǧenaten* the tent with its straw-mats are given by the husband and/or his relatives.

(4) Some time after marriage it is customary for the husband to give his wife a gift of animals according to his means – a few goats, one or two camels. This gift however remains in the husband's camp so that the animals serve the need of his household.

(5) It does not seem customary in Ahaggar for the groom to give his bride clothes and ornaments, though it is said that in the *Dag Ṛali* tribe the groom has to give his bride two silver bracelets known as *ihebǧan* (sing. *ahbeǧ*).

602 (b) *Obligations of the bride's family.*

583 To illustrate the obligations of the bride's family I list what is considered the proper outfit of the bride in the *Dag Ṛali* tribe as follows:—

1 skin tent (*éhakit*) with the necessary number of poles (cf. p. 364, Figs. 267 ff.).
2 tent mats (*isebran*, sing. *éseber*) plaited from the *afeẓu* grass (*Panicum turgidum*) (cf. Figs. 267–269).
3 large decorated skin-bags (*iṛerǧan*, sing. *aṛreǧ*) used for storing personal belongings in the tent.
1 *ahaga*, a large container made of untanned camel-hide and used mainly for tanning (Fig. 213).

583

5 wooden eating bowls (*tiṛha*, sing. *taṛehut*) (Figs. 195a).
2 wooden milk-bowls (*ikassen*, sing. *akus*) (Fig. 21b).
1 earthen cooking pot (*téṛirt*) (Fig. 187a–b).
10 wooden spoons (*tisukalin*, sing. *tesukalt*) for eating millet porridge, bread, and the like (Fig. 191).
1 metal container (*éṛir*) used for storing butter (Fig. 164).
1 leather cushion (*eddefeṛ*) stuffed with hay.
1 woven carpet (*ahwar*) to be used as a sitting-carpet in the tent, but also as a blanket. It has several colours but is predominantly red. It measures about 1.50 × 5.00 metres.
1 carpet or blanket (*tahwart*) of the same type, but smaller.
1 woven blanket (*tabroḳ*) which serves as a mantle in winter.
5–6 donkey-saddles (*irukan*, sing. *aruku*) (Fig. 86).
5–6 donkeys (*ihéḍan*).
10–40 goats (*ulli*) according to the means of the bride and her family.
1 slave (*akli*) or a slave-girl (*taklit*) may also be given.

All these objects and the animals, which form part of the dowry, are primarily given by the bride's parents, but as the objects and the animals constitute a considerable fortune the parents cannot always provide the necessary dowry. It is customary therefore for close relatives to give a helping hand. Many of the dowry objects are made collectively by Tuareg women of the bride's camp (e.g., skin-bags and donkey-saddles) while other objects are obtained from the blacksmiths (wooden and metal containers, etc.). The skin tent and the tent mats are also often made by the women of the bride's camp.

The bride-wealth and other objects given by the groom and his family are less comprehensive and 602
less valuable than the dowry given by the bride's family. The two bride-wealth camels given among 583
the *Dag Ṛali* may sometimes be used by the bride's father to cope with some of the expenses connected
with the raising of the dowry, but they do not cover his total expenses. However, if we consider a [586]
marriage of the ideal type, that is a man marrying his mother's brother's daughter, the bride's father
will willingly help his sister's son who is to become his son-in-law, and the dowry will not be lost in
the event of divorce, as the wife will then bring all dowry back with her to her father's camp.

ECONOMIC OBLIGATIONS ON MARRIAGE IN AYR (KEL FERWAN)

(a) *Obligations of the groom and his family.* 602

(1) bride-wealth (*taggalt*) is not paid according to fixed rules as in the Northern Tuareg groups. The 583
size of bride-wealth is always discussed. Thus it is said that virgins are valued higher than experienced
women, and that bride-wealth is higher for a wealthy woman than for a poor one. In most *Kel Ferwan*
tribes bride-wealth constitutes one to three camels, but poor people may accept even two camel feet
(that is half part in a camel) as bride-wealth for their daughter. In noble tribes there is also no fixed
size of bride-wealth which is said to vary from ten to twenty camels for a noble woman – the deceased

583 drum-chief *Agg-Elkhir*'s son, *Khejji*, gave twenty camels for his wife. In certain tribes living around Agadez bride-wealth is nowadays also paid in cash. At a man's first marriage bride-wealth is paid by his father and is given to the bride's father who can dispose of the camels at his discretion. In the *Kel Ferwan* group all bride-wealth must be handed over to the bride's father before marriage takes place.

(2) *tisrar*, that is a gift to the bride and a gift of food to her parents who arrange the wedding-feast. These gifts are given by the husband or his parents and comprise the following:—

[291] 15 metres of cotton for two outer skirts (sing. *téri*) (cf. p. 294).
3 metres of cotton for one under-skirt (*tesegbes*) (cf. p. 294).
3 metres of cotton for a woman's shirt (*aftek*) (cf. p. 293, Fig. 239a).
3 *ilechchan* (sing. *alechchu*), indigo-dyed pieces of cotton which serve as the headcloth (*adalil*) of a married woman (cf. p. 14, 293).
1–2 pairs of *iṛatimen* (sing. *éṛatem*), sandals of the *takalmi*-type (cf. p. 298, Fig. 242b).

[212] The amount of food to be given for the entertainment of wedding guests varies, but in general is estimated at 100–200 kgs millet (*énélé*), 10–15 litres of butter (*wiji*), and 5 litres of Sudanese honey (*tariwat*), plus an ox.

The gifts of cotton and food should be brought to the bride's father before marriage with the bride-wealth. The bride should not see the bride-wealth animals, nor should she see the gift of cotton until it has been made into her wedding clothes.

585 (3) The groom and his family have no obligations towards the bride and her family other than those mentioned above, but the groom is expected to give certain gifts to his wife after marriage:—

One gift is known as *timigint*. Before the bride is led into the wedding tent where the groom awaits her (cf. p. 474), the women who lead the veiled bride will claim a promise of *timigint* for the bride. On behalf of the groom one of his friends will promise to give the bride a gift – perhaps a camel – though there is no rule for the size of this gift. When the promise is given the women lead the bride into the tent. It is said that the groom is never forced later to give the *timigint* gift promised.

Some time after marriage the groom is expected to give his wife certain silver ornaments, notably the following:—

[301] *t'izabatin*, a pair of large ear-rings.
ténélét, a ring-formed pendant.
zakkat, the so-called Cross of Agadez, and the so-called Cross of Iferwan.
tadnet (perhaps not correctly spelled), a necklace.
térewt (pl. *téra*) *ta n tejekkot*, a silver ornament attached to the hair braid at the back of the head.

(b) *Obligations of the bride's family*:— 602

The bride's family has to provide her with everything necessary for domestic life:— 583

1 mat tent (*éhen*) (cf. p. 350 ff., Figs. 265a–f).
1 bed (*tédabut*) (Fig. 212a).
2–3 bed mats (*isebran*) (Fig. 212b).
Further: skin-bags, eating bowls, spoons, cooking pots, etc. A certain number of domestic animals should also be included in the dowry of a bride.

It is clear that both in Ahaggar and in Ayr a marriage is connected with great expenses both for the 589
groom's and the bride's families. In view of this it may seem important that cross-cousin marriage 602
creates a fixed system of exchange between two families which have definite relations to one another.

When marriages are contracted the economic aspects are not considered most important by all 581
Tuareg. Some Tuareg will let their daughters marry less wealthy people if they are considered good men. But to many, and I believe most, Tuareg the economic aspect of marriage is important, and it is generally said that it is more difficult for poor people to obtain a spouse than it is for wealthy people. A poor girl cannot so easily find a husband as a wealthy one, and wealthy girls can be married even though they are not very good-looking.

Normally, a widow will not have much difficulty in getting married again even though she has one 587
or a few children, and the same holds good for a divorced woman. But it is most remarkable that, in Ahaggar, a widow cannot remarry if she has a half-grown son of 12–15 years old who is opposed to her marriage. If the boy is unwilling to let his widow mother marry, people will normally try to induce him to yield to his mother's wish by means of gifts. But if the boy refuses nothing more can be done, and the case cannot even be brought before the *Amenukal*. There may be several reasons for this particular custom, and the following two points should be noted:— (1) When the boy's mother remarries it may imply a shift of residence, as she will join her husband's camp and the boy would live with his mother. (2) The boy's inheritance rights are reduced when his mother remarries. This is evident when we consider the rules of inheritance described above p. 137 f. If his mother does not remarry the boy is the sole inheritor of her whole fortune. If his mother marries again her new husband and his children with the boy's mother will have important inheritance rights to her fortune, while the boy will have no right to inherit from his stepfather.

Inheritance rights in connection with rules of residence are facts which are considered important 581
to most Tuareg when desirous of arranging marriages for their children. A woman cannot marry 584
without her parents' consent, and a man who wants to marry will have to ask his parents and a great many other relatives of ascending generations, including his elder brothers. However, what really matters is the word given by his father. If the father agrees to his son's marriage there will not generally be any further complications about its realization. If the father disagrees there will be no marriage, though in Ahaggar a grown man can bring his case before the *Amenukal* should his father not allow him to marry the woman he wants (cf. p. 400 f.).

First marriages are frequently arranged by the parents (the father) and are not necessarily contracted
with cross-cousins.

582 with cross-cousins. There are very few relatives with whom marriage is strictly forbidden. A man must not marry a kinswoman of ascending generations, and he should not marry a woman who is his mother-in-law (daughter-in-law) from a previous marriage. With the exception of his own true sisters he is allowed to marry any kinswoman of his own generation, and in the first descending generation he can marry all women except his own daughters and daughters of his brothers and sisters.

582 In Ahaggar where the Tuareg practise a fixed system of patrilocal and matrilocal rules of residence,
591 cross-cousin marriages will imply shifts of residence which can be avoided by other types of marriage.
581 Many Ahaggar Tuareg prefer to arrange for their sons marriages with a mother's sister's daughter (that is a classificatory sister) or with her daughter (that is a classificatory sister's daughter). When the Tuareg thus marry directly into their own matrilineage there will be no shift of residence from one camp (tribe) to another, and children will have rights of inheritance and succession to kinsmen of the same local group. Marriage with a mother's sister's daughter or with her daughter is in fact better suited to rules of inheritance, succession, and residence than is marriage with a cross-cousin. I have met many Ahaggar Tuareg who claimed marriage with a mother's sister's daughter to be preferable to cross-cousin marriage, though they admitted that the latter was traditionally the preferred type.
582 My statistical material, which is not very comprehensive, seems to indicate that in Ahaggar marriages with a mother's sister's daughter and with her daughter are more common than are marriages with cross-cousins. This may be seen from the composition of 44 marriages contracted with kinswomen:—

Mother's brother's daughter	3
Father's sister's daughter	7
Classificatory cross-cousins	6
Mother's sister's daughter	11
Mother's sister's daughter's daughter	9
Other kinswomen	8
Marriages total	44

The *Kel Ferwan* Tuareg say that marriage with a mother's sister's daughter or with her daughter is also practised among them, but that such marriages are not particularly common. This agrees with my statistical material which is very scarce also from the Ayr Tuareg:—

Mother's brother's daughter	7
Father's sister's daughter	4
Classificatory cross-cousins	6
Other kinswomen	14
No blood-relationship	8
Marriages total	39

[178] These statistics are less valuable than those from Ahaggar, for they are collected mainly from tribes
582 living around Agadez where social customs tend to fall into disuse. However, cross-cousin marriages
591 are still very common in these tribes where there is a tendency to follow patrilocal rules of residence and patrilineal succession. The reason why the *Kel Ferwan* Tuareg do not consider marriages with

women of their own matrilineage particularly suitable seems to be connected with these rules of 582
residence and succession. Marriages with maternal kinswomen are clearly advantageous to the Ahaggar 591
Tuareg, where residence is ultimately matrilocal, while such marriages in Ayr have no proper justification.

Tuareg kinship systems in Ahaggar and among the *Kel Ferwan* Tuareg seem to be adapted to cross- 601
cousin marriage. Parallel cousins are termed brothers and sisters, while there is a particular term for 605
cross-cousins and between them an institutional joking relationship which facilitates contact and 581
marriage. The Tuareg seem to admit that one function of joking between cross-cousins is to promote marriages between them, and they say that in the period during which a man and a woman are in love with each other before marriage – a period which is known to the *Kel Ferwan* Tuareg as *térejjek* – there will always be joking between them even though the two persons are unrelated.

Joking relationship between cross-cousins has another function in addition to that of facilitating mar- 602
riage. In the description of political systems it has been mentioned that joking plays a rôle in preventing conflicts between people of different classes and castes. When a man marries a cross-cousin, his cross-cousins will become brothers and sisters-in-law with whom joking continues, and there will always be joking with the brothers and sisters of a spouse unless a man marries a particular kinswoman (cf. p. 466). It is the rule that there is joking with brothers and sisters in-law who preferably are also one's cross-cousins so that this joking relationship should in such cases have existed even before marriage. I believe that this convention helps to restrict conflicts between a person and the spouse's family of his own generation, and that joking between in-laws of the same generation has much the same function as has avoidance between parents-in-law and sons and daughters-in-law. There can be no doubt that this type of avoidance is important to the maintenance of good relations between in-laws of different generations, the more so as the Tuareg explain their avoidance relationships by saying that it is only natural that avoidance is particularly strict between people of different sexes in the way that a man avoids his mother-in-law very strictly, a woman her father-in-law equally strictly, for a man has a particularly strong influence over his son, and a woman possesses a corresponding influence over her daughter; consequently conflicts between a man and his mother-in-law, and between a woman and her father-in-law can easily arise.

Radcliffe-Brown was the first to point out the identical functions of joking and avoidance. These
outwardly such different types of behaviour both serve to prevent conflicts between in-laws (cf. Rad-
cliffe-Brown 1950, p. 56 ff.; 1952, p. 90 ff.). This theory is very important, and I believe that it is not
only confirmed but augmented by the material I have brought back from the Tuareg. It is clear that
conflicts cannot easily arise between two persons who avoid each other, and the same is true of two
joking partners as when everything is permitted, it is difficult to quarrel. Morally, joking is considered 605
a very good thing, and cross-cousins who do not like to joke much are in public opinion bad cross-cousins. However, the intensity of joking between cross-cousins depends very much on the age difference between the two if they belong to the same sex. There will always be much joking between cross-cousins of the same age, while cross-cousins of very different age will joke very little or not at all. With extreme difference in age, two male cross-cousins may even change their joking relationship into avoidance, though this does not seem to be normal.

582 In case of cross-cousins of different sex, the difference in age does not seem to diminish joking
604 between them, and it is most interesting that the *Kel Ferwan* Tuareg have an institutional joking
606 relationship in the case of a mother's brother's wife (cf. p. 455). This joking relationship, like that between cross-cousins and in-laws of the same generation, is definitely also a relationship of great friendship, and it has a very particular function in connection with cross-cousin marriage. For if a man marries the cross-cousin who is considered the best possible spouse, namely his mother's brother's daughter, it is evident that mother's brother's wife with whom he has a relationship of intense joking will become his mother-in-law. In other words:— When a man marries according to traditional rules he will acquire a reciprocal avoidance relationship to a woman with whom he had intense joking until marriage. So it seems as if joking between a man and his mother's brother's wife serves the purpose of preventing conflicts and creating a bond of friendship between a man and his future mother-in-law.
606 It can be added that the relationship between a man and his mother-in-law is normally one of great friendship, though they very often avoid each other to the extent that they never speak together. A son-in-law and a mother-in-law will frequently exchange gifts during visits to each others' camps, but will generally avoid each other in the way that a man visiting his mother-in-law's camp will stay at a distance of up to a hundred metres from her tent. The relationship of avoidance is somewhat different in case son-in-law and mother-in-law live together in the same camp, though they will always avoid each other to the extent that they talk extremely little to one another and never eat in each other's presence.

602 Joking and avoidance between Tuareg in-laws no doubt constitute a fixed system of behaviour
582 adapted to a particular marriage type, namely that with a cross-cousin – ideally with a mother's brother's daughter. If a man marries a woman with whom he has no blood relationship he will practise joking with his brothers-in-law and sisters-in-law, and avoidance towards his parents-in-law. His behaviour towards all these in-laws will not differ from that he would adopt towards his in-laws if he were married to a cross-cousin. But if a man marries a kinswoman who is not his cross-cousin he will not always obtain relationships of joking and avoidance towards all in-laws. To illustrate this I mention the following examples from the Ayr Tuareg of the *Kel Ferwan* group:—

(1) If a man marries the daughter of a true cross-cousin he will not achieve any joking relations with his brothers and sisters-in-law. He will not avoid a cross-cousin who is his parent-in-law, but he will cease to joke with him or her. The same rule is probably valid for the cross-cousin's spouse, who will be a classificatory brother-in-law or a sister-in-law.

(2) If a man marries a daughter of a classificatory cross-cousin he may joke with his brothers and sisters-in-law, but there will be no avoidance relationships in regard to the parents-in-law.

(3) If a man marries the daughter of a classificatory child or a classificatory sister's child there will be joking with his brothers and sisters-in-law. I assume that in this case there will also be avoidance between a man and his parents-in-law.

(4) If a man marries a mother's sister's daughter or her daughter there will be no joking with his true brothers-in-law and sisters-in-law, but there will be some avoidance towards the parents-in-law.

Joking, and to some extent also avoidance, are modes of behaviour which are particularly adapted
000 to cross-cousin marriage, or to marriages with foreign women. The same is perhaps the case with

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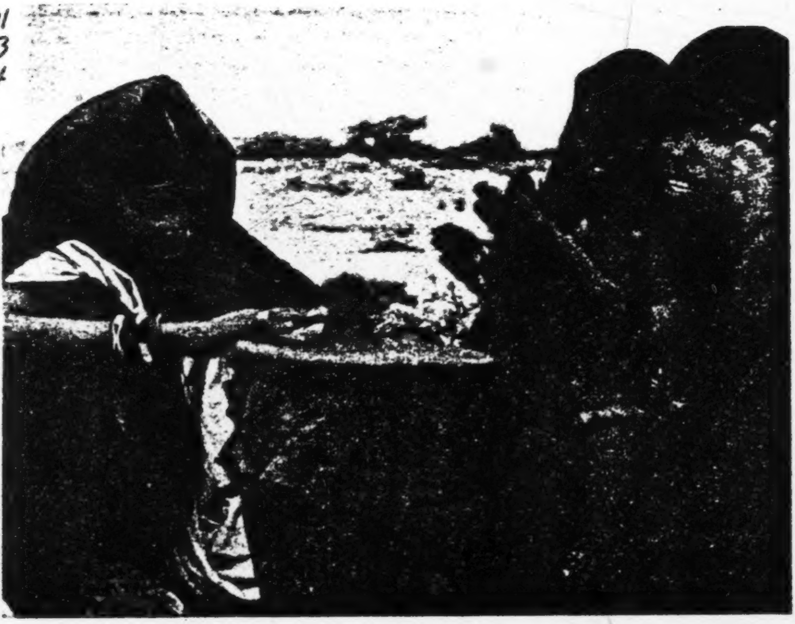

Fig. 295. Tuareg women drumming and singing at a feast. The drum is a large mortar provided with a piece of goat-skin. Ahaggar, the *Aguh-en-tehlé* tribe.

The same is perhaps the case with

583 bride-wealth which does not constitute a proper purchase. The payment of bride-wealth may have an economic aspect, but its main function is most probably not a purely economic one.

583 What then is the function of bride-wealth? I believe that this question can be answered if we consider
586 Tuareg feelings towards bride-wealth in case of divorce. If a man divorces his wife because she has
848 committed adultery, he has the right to the return of his bride-wealth animals, but the Ahaggar Tuareg
say that it is improper to claim the return of bride-wealth whatever the cause of the divorce, and the Ayr Tuareg consider it most disgraceful. It would be shameful, utterly improper in fact, if a dissolved marriage has been blessed with children. For children born of a marriage dissolved by the husband taking back his bride-wealth are very much like *anibu*, that is "a child born out of wedlock". Bonds of kinship in respect of illigitimate children are not socially recognized. These children are looked down upon even by their true kinsmen. Illigitimate children therefore have great difficulty in getting married, and this is also true of their mothers. Nobody wants to marry a woman who has children born out of wedlock, while a divorced woman having one or several children can easily get re-married.

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583 It would seem from all this that the main function of bride-wealth is to create a social bond between
586 two families that intermarry, and is a sort of confirmation of the social rights of the children. When
848 bride-wealth is not taken back at the dissolution of a marriage the marriage is not socially dissolved. When two people divorce they continue to have each other's relations as in-laws with whom they have joking and avoidance exactly as if they were still married, and the children continue to have their full rights within both families.

The fact that bride-wealth is the outward symbol of the persistence of in-law relations when a marriage is dissolved, discloses the true meaning of bride-wealth, which is more clearly understood when we consider that children of a dissolved marriage, provided the bride-wealth is not claimed back, will belong to the father as long as he is alive, and not to the mother. The mother and her family obtain no right to the children until their father has died. It is further stated by some Tuareg that a child of a dissolved marriage from which bride-wealth is taken back will have no right to inherit its father. Bride-wealth is a symbolic expression of the new bonds established between two families at a marriage, and it places children of this marriage in the father's family until his death, and secures their inheritance rights in respect of the father and his paternal kin. All this seems to agree with the fact that the Northern Tuareg vassals, who give bride-wealth in goats, do not always hand over all animals at a marriage. The full payment may be postponed for some years, but should be accomplished before the birth of a child.

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[171] The explanation I have given of the functional position of Tuareg bride-wealth would seem to be in agreement with Radcliffe-Brown's account of the functional position of the *lobola* payments of South Africa. Radcliffe-Brown says that one of the chief functions of *lobola* is to fix the social position of the children of a marriage. If the proper payment is made by a family, then the children of the woman who comes to them in exchange for the cattle belong to that family (Radcliffe-Brown 1952, p. 30). This is also stated by Krige (cf. Krige 1937, p. 113).

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582 The functional position of Tuareg bride-wealth should perhaps also be viewed in the light of recent investigations on the function of bride-wealth in Middle Eastern societies, where preferential marriage is that to a father's brother's daughter. This preferential marriage type has been explained in different ways by different authors. Westermarck says that marriages with a father's brother's daughter are popular because they keep the property in the family, and especially popular in shereefian families, because they preserve the blood pure (Westermarck 1914, p. 53). The argument that marriage with a father's brother's daughter keeps property within the family has been recognized also by Granquist (cf. Granquist 1931, p. 78), and by many other anthropologists. But this argument is valid only when Ķoranic law is observed, which is not always the case (F. Barth 1954, p. 170; cf. Murphy & Kasdan 1959, p. 17).

Wellhausen observed that marriage with a paternal cousin served the purpose of strengthening the kinship tie within the family, and he believed that marriages contracted within a village had the function of solidifying relationships between its inmates (cf. Westermarck 1914, p. 56). Quite recently this viewpoint has been taken up and reformulated by F. Barth who states that marriage with a father's brother's daughter plays a prominent rôle in solidifying the minimal lineage as a corporate group in factional struggle (F. Barth 1954, p. 171), while Murphy and Kasdan, who refer to Barth's study

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Fig. 296. Tuareg women dancing in front of professional musicians of Agadez. Ayr, the *Igendíynen* tribe.

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state the converse proposition that it underlies the extreme fission process characteristic of Arab lineage structure the one structural function of the institution promoting the segmentation process. From this point of view feud and fission are not at all dysfunctional factors, but are necessary for the continuity and viability of Bedouin society (Murphy & Kasdan 1959, p. 18). Such theories of marriage with a father's brother's daughter and its functional connection with the political system may contain an important element of truth, though Westermarck was told in Morocco that cousin marriages easily lead to quarrels between the husband's and the wife's families, both of whom want to interfere in the married life of the couple. Furthermore, Westermarck observes that this argument against cousin marriage was used by the Arab poet, Mu'allakāt (Westermarck 1914, p. 54 f.).

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All over the Near and Middle East where marriages with a father's brother's daughter constitute the traditional type of mating, it is a rule that a man should have the right to marry his paternal cousin for a reduced price or only pay the wedding expenses. This custom is richly confirmed in the literature from North Africa and the Arabian Peninsula. It has also been observed among the Kurds by F. Barth, who thinks that bride-wealth is paid should a man not marry a paternal cousin, as compensation to the bride's father because he does not secure that reinforcement of his minimal lineage which would have been acquired had his daughter married his brother's son (cf. F. Barth 1954,

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582 p. 168 ff.). I do not want to judge this theory as I have little personal knowledge of the North African
583 Arabs who practise marriage with a paternal cousin. However, the argument that one of the chief
[114] functions of the bride-wealth is the confirmation of the social position of the children of a marriage, seems also valid for bride-wealth customs among people who practise preferential paternal cousin marriage, for it is clear that should a man marry a father's brother's daughter she will not have to change her social group after marriage. Furthermore, the fathers of the groom and the bride are brothers who among North African Arabs may own livestock and other types of property in common.

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582 Tuareg cross-cousin marriage is symetrical, but the very best cross-cousin to marry is the true
604 mother's brother's daughter. This would seem to agree with the very close relationship between a
613 man and his mother's brother of the same matrilineage. A man has succession rights after his mother's brother, and many Tuareg say that the relationship between sister's son and mother's brother is as close as that between father and son. A man should do his outmost to defend his mother's brother, and it is very likely that marriage with a mother's brother's daughter has as its chief function the reinforcement of the matrilineage. It can here be added that marriage with a mother's brother's daughter will not easily lead to quarrels between the families of the married couple, because the fathers of the groom and the bride are cross-cousins and/or brothers-in-law, and consequently there is an institutional joking relationship between them.

We should perhaps explain Tuareg marriage with a mother's brother's daughter in the light of its importance for the reinforcement and maintenance of the matrilineage which has important social functions in Tuareg society. However, this marriage type does not exempt the groom or his family from paying bride-wealth.

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[171] It is interesting to note that among the South African Bantu, who give bride-wealth (*lobola*) at a marriage, the groom is expected to assist his parents-in-law whenever they need his help (Krige 1937,
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606 p. 113). This is also so among the Tuareg who claim that parents-in-law and sons-in-law should always support each other even if they be in-laws of dissolved marriages from which bride-wealth has not been claimed back. Indeed, some Tuareg consider it a very good thing to have contracted several marriages and thus to have obtained many in-laws who are expected to assist their son-in-law when he needs their help.

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582 Finally, I add the statement of some Ahaggar Tuareg that bride-wealth payment is often considered
583 less essential where a man has married a maternal cousin or her daughter because in that event husband and wife are maternal relatives who, in case maternal cousin marriage is practised within their families, may be closely related also in the paternal line.

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585 Both in Ahaggar and in Ayr the marriage is ratified by representatives of the groom and the bride
[793] before an *Aneslem*, that is to say a marabut. This may take place on the first day of the wedding ceremony, but it may as well be done days, weeks, or even months before the wedding takes place. The parents of the groom and the bride may have the marriage ratified even though their children do not want to be married. The wedding ceremonies in Ahaggar and Ayr differ slightly, but they are no doubt functionally identical.

In Ahaggar the marriage ceremony is briefly as follows:—

(1) The wedding is held close to the camp of the bride's family. A flat sandy place is selected for 585
the ceremony. Relatives and guests from other tribes arrive at this place on the first day of the wedding feast. They are greeted by members of the bride's family, and are offered tea and food. Early in the
afternoon the ceremonial ride termed *ilugan* is performed (cf. p. 104 f.). After darkness the guests 533
gather at the wedding place to drum and sing, to play the violin, and slaves and certain vassals dance 534
to the accompaniment of women, who sing and clap their hands. The party will continue in this way until about midnight when all music and singing ceases. – The ceremonial camel ride and the musical gatherings here described are not attended by the bride or the groom. At this juncture they are separated from each other in tents hidden from the wedding place and pitched in opposite directions. They sit in particular tents and both have their faces closely veiled. The groom wears several veils wrapped around his head and face allowing only a very narrow slit for the eyes. The bride is still more closely veiled by a piece of cotton around her head.

(2) When the guests have stopped making music shortly before midnight, preparations are made for the first ceremonial meeting of the bride and the groom at the sandy wedding place. Digging with potsherds, wooden and metal containers, and with their hands the women make a little sand-hill about one metre high and just big enough for two people to sit upon it. When this sand-hill, known as *adebel*, is erected, the wedding tent is brought to the ceremonial place with loud cheers, shrills, and drumming. The sheet of skin is to be suspended over the sand-hill, but before this is done a woman lies down upon the ceremonial hill with a pole in each of her hands. The tops of these poles she presses firmly against each other. While the woman lies thus, two men take up position on each side of the hill with the recumbent woman. They now throw the tent skin between them three times over the sand-hill and the woman. When this is done the tent is erected over the sand-hill in a very imperfect way the sheet resting upon the two poles buried in the ground in the front and upon a shorter pole at the back. The lower part of the skin-sheet is kept to the ground by means of sand and stones. A blanket (*ahwar*) is finally placed over the sand-hill, and most people now leave the wedding tent to fetch the groom and the bride.

(3) Shortly after the erection of the wedding tent the groom leaves his camp in the company of a great many young men. They lead the closely-veiled groom towards the wedding tent, and walk slowly, singing certain Ḳoranic passages. Arrived at the ceremonial place the procession with the groom walks three times around the tent, keeping to the right, and the groom is then led into the tent where he sits down upon the sand-hill. The men squat around the tent to await the arrival of the bride. They talk now and then to the groom who does not reply, or does so in a very low voice.

(4) The bride comes to the wedding tent about half an hour or an hour later than the groom. She is led by a procession of young women, and she walks in the middle of the procession which proceeds with extremely small steps, giving the impression that it hardly moves at all. The young women of the procession lead the bride towards the tent with singing, drumming, and loud cheers and shrills. When they have arrived at the tent they walk around it with the bride three times, keeping to the left, and then stop before the entrance. They claim a pair of sandals for one of the bride's cross-cousins (cf. p. 443, 459); when the sandals have been handed over they lead the bride into the tent where she is placed upon the sand-hill behind the groom. The bride and the groom are thereupon left to themselves, while

585 young people of both sexes begin to drum and sing at a short distance from the wedding tent. They do that not only to amuse themselves but also to pay homage to the couple to be married. They continue to sing and drum until shortly before sunrise, when everybody leaves the place. Shortly afterwards the groom and the bride leave the wedding tent to walk back to their individual tents situated in opposite directions of the wedding place.

(5) In the morning at about ten or eleven o'clock the wedding tent is taken down to be erected again in a normal way at a short distance from the first place it was pitched. Care is taken that the sand-hill is left untouched; it is never touched by anybody and in time is obliterated by the wind. When the wedding tent is re-erected it is put up correctly like a normal tent with the sheet attached to twelve poles around the structure, and is provided with mats which are drawn around the lower part of the tent. However, the interior arrangement differs from that of a normal tent in that a long and very flat sand-hill known as *tuf-adebel* is made; it is very low in comparison with the first sand-hill known as *adebel*. This low sand-hill serves as the sitting place for the married couple, and is covered with coloured blankets.

(6) The veiled groom comes to the tent in the morning just before midday. He is accompanied by young men, but he is not now led by them, but walks in front of the procession. He enters the tent and sits down upon the low sand-hill. Friends and relations gather around him in the tent, but he avoids talking to them, or, if he does, then only in a low voice.

(7) In the afternoon the wedding guests arrange the ceremonial camel ride (*ilugan*) in front of the wedding tent so that the ride can be seen by the groom.

(8) Before the ceremonial ride ends at darkness, the veiled bride is led to the tent where she is placed by the side of the groom on the low sand-hill.

(9) The wedding guests sing, drum, and dance the whole night in front of the wedding tent.

(10) The guests leave the wedding place the next morning to return to their camps. If they have no avoidance relationships with the married couple, they will go to the wedding tent to say good-bye before they leave. The wedding feast is now over.

(11) The newly-married couple remain in the tent for seven days in all, during which period they leave the tent only to releave nature and preferably after darkness.

591 (12) When the seven days' stay is over the bride remains in her father's camp for about one year, and traditionally her husband should stay with her for that period. However, he will usually stay only part of this period in his wife's camp, returning frequently to the camp of his father. If the husband stays in the wife's father's camp for a year he has no obligations towards the members of the [583] camp. There is no bride service.

585 Among the Ayr Tuareg a wedding is known as *éduben*, or as *éhen*, and these terms are identical with those used in Ahaggar. From the latter term we see that the tent plays an important part also in the wedding ceremony of the Ayr Tuareg, but there are ceremonial distinctions as will be seen from the following description:—

(1) On the first wedding day relatives and friends arrive at the wedding place at the camp of the bride's family. The wedding tent is already erected. This is done in the normal way with the exception that the entrance is at the narrow end turning southwards, while a normal tent is always entered from

[Text continues on p. 474]

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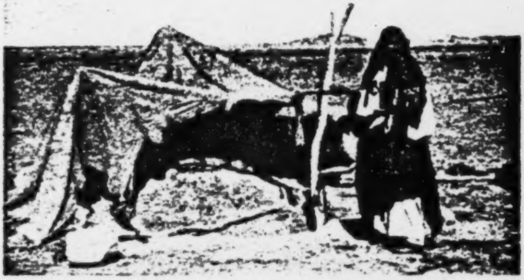
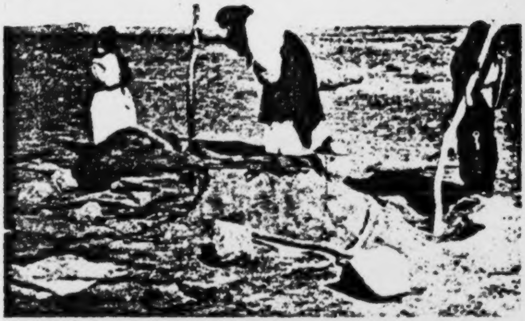
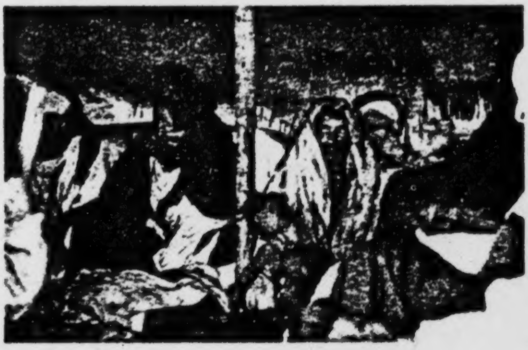
Fig. 297a–c. From a wedding ceremony.



a. A woman in front of the skin tent erected over the ceremonial sandhill (*adebel*) on which the couple to be married sit during the first wedding night.



b. The skin tent is removed from the ceremonial sandhill, which is left untouched.



c. The tent correctly erected with the married couple sitting upon the low sandhill (*tuf-adebel*). The groom sits to the left of the central tent post, the bride to the right. Both groom and bride are veiled. Ahaggar, the *Iheyawen Hada* tribe.

585 the broad side turning westwards. Inside the tent there is nothing beyond the large bed (*tédabut*) covered with mats and blankets.

(2) The wedding guests perform the ceremonial camel-ride (*ilugan*) in the afternoon and continue to sing, make music, and dance throughout the night.

[262] (3) The wedding feast continues the next day with the killing of an ox for the guests. On this day, early in the night (about nine o'clock), the groom comes to the wedding tent. He is closely veiled and walks in the middle of a large procession of men and some women. The procession walks slowly, the [533] women accompanying it shrilling and cheering. If the camp is situated close to Agadez the procession is led by professional musicians who on this occasion are on horseback. When the procession has arrived at the wedding tent the groom enters into it directly and without much formality, but does [514] so through the narrow end turning southwards. Some of his friends squat around him in the tent while a few blacksmiths drum and praise the groom in songs which also refer to the fact that the blacksmiths have arrived in order to transform the wedding into a great feast. When the groom has entered the tent most guests continue to dance and make music until about eleven o'clock, when the bride arrives.

(4) The bride is led towards the wedding tent by a procession of singing women who are not accompanied by musicians mounted on horses even if the camp is close to Agadez. The procession proceeds extremely slowly, and sometimes almost marks time. The women sing the praise of the veiled bride who walks in the middle of the procession behind a tall woman. The bride's hands are around the tall woman's waist, and she is hidden under a large piece of white cotton placed over the tall woman's shoulders and back. When the procession is close to the tent it is joined by many men and by the drumming blacksmiths who lead the procession to the wedding tent. Here the procession walks three times around the tent, stopping in front of the narrow entrance facing southwards. The women now claim the promise of a gift from the groom to his bride (cf. p. 462). When a gift has been promised the tall woman creeps into the tent with the bride clinging to her back. The bride is placed upon the bed together with the groom who is already sitting there, the mat at the southern end is drawn to and closed, and the bride and the groom are left alone. The wedding is now over, and the guests leave for their tents and camps.

(5) The bride and the groom now remain seven days in the tent. They leave it only to releave nature [591] and preferably after darkness. When this stay of seven days in the wedding tent is over, the newly-married couple immediately take up residence in the camp of the husband's father.

From the description of T[illegible] wedding ceremonies above we see that they develop very slowly. This is particular so in Ahagg[illegible] the bride and the groom are brought together to be separated again before being finally united in the correctly erected tent. In Ayr the bride and the groom are brought together more directly, but do not meet until the second day of the wedding feast. They then have to enter the tent in an abnormal way – through the narrow southern end. The fact that the ceremony develops slowly and that the tent is not correctly erected are traits typical both of the Ahaggar and the Ayr Tuareg.

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121 It is clear that the groom and the bride during the ceremony live so to speak outside the community. Tuareg wedding ceremonies are characteristic rites of passage and contain traits common to many

initiation rites. Arnold van Gennep in his famous study on rites of passage long ago pointed out the 585
universal occurrence of such rites including wedding ceremonies (van Gennep 1909). But it seems 121
as if their functional position has never been described in great detail, so I shall now try to analyse
Tuareg wedding ceremonies where the groom and the bride were cross-cousins as prescribed by tradi- [582]
tional marriage customs. Such a marriage gives rise to important modifications of kinship behaviour
as follows:—

(1) Until their marriage the groom and the bride had a joking relationship to one another. It seems 605
as if this tends to stop before marriage when the groom and the bride have come to know each other
well but even though joking may cease before marriage, the position of the two cross-cousins becomes
entirely different once they have married. For though the two have almost the same rights, the wife 593
[illegible]ected to show her husband great respect, and while the husband will always address his wife by 601
[illegible]ame this is not reciprocal. A wife cannot address her husband by his name, but must call him
amṛar which means "the old one" in a respectful sense. It is used as a designation for all elderly people [576]
to whom respectful behaviour is necessary, and is also a term for tribal chiefs (cf. p. 396). In Ayr a
wife may also address her husband as *mai-gidā*, a word of Hausa origin, but with much the same
meaning. The wife may also address her husband as the father of one of their children, e.g., *adda n
Mokhammed*, that is "Mohammed's father". The wife's behaviour towards her husband should on 593
the whole be very much like that of a person towards people of ascending generations. She is not
expected to talk too much in her husband's company, and must not talk at all when strangers are
visiting the camp. – One of the functions of the wedding ceremony is change of the free behaviour
between partners into a respect relation. All Tuareg questioned about the matter have admitted that 585
during the wedding ceremony they have felt almost "afraid" or "ashamed" towards the wife. Some
of them say that though they already knew the bride extremely well sexually they did not cohabit
with her during the seven days' stay in the wedding tent.

(2) The husband and the wife enter into a great many in-law relationships as the result of their 606
marriage. To some of these in-laws joking has already been established owing to the cross-cousin 607
relationship. To other brothers-in-law and sisters-in-law, joking is adopted only after marriage. This of course is true of all brothers and sisters-in-law should husband and wife have no blood-relationship to each other. – The newly-married couple enters into an elaborate avoidance-relationship to their true and classificatory parents-in-law. Their position towards these relations before marriage was one of respect, which is now reinforced by avoidance. In Ayr the husband changes his joking relations with mother's brother's wife into avoidance. It seems as if avoidance relations established at a marriage partly explain the wedding ceremony, for the Tuareg say that a young and newly-married couple will sometimes stay in the wedding tent more than seven days on the grounds that they are afraid to emerge and meet the parents-in-law.

It seems as if the wedding ceremony in its whole arrangement corresponds well to the modification 585
of kinship behaviour at a marriage. The dominating position of the husband is intimated by the fact 602
that he comes first to the tent which is entered in a more direct way than is the case for the wife who comes later. It would seem as if the ceremony is less suited to marriages like those with a mother's sister's daughter or her daughter, as in such marriages the kinship behaviour of the spouses and in-

585 laws do not change to a very great extent. There will then already be a relationship of respect between
602 husband and wife, a respect relationship to brothers-in-law and sisters-in-law which continues unchanged,
and in Ayr the relationship to the mother-in-law does not switch from joking into avoidance.
Tuareg wedding ceremonies correspond functionally with the traditional preferential marriage with
[184] cross-cousins. But the wedding ceremonies described are strictly followed at all Tuareg marriages
except in the case of important marabuts, who dispense with most ceremonial traits, allowing no
public gathering with camel-riding and music, and the groom and the bride enter the wedding tent
without formalities.

105 Kinship systems, rules of kinship behaviour, the payment of bride-wealth, and wedding rites seem
to be functionally adapted to cross-cousin marriage. All this seems to hold for the Tuareg of Ahaggar
and also for those of the *Kel Ferwan* drum-group in Ayr. However, we have also observed that there
are certain differences in social organization in Ahaggar and Ayr. In both regions Ḳoranic law is
valid for inheritance. The rules of succession in Ayr have become predominantly patrilineal, but is
matrilineal in Ahaggar. There is also little doubt that most *Kel Ferwan* Tuareg to-day follow patrilocal
rules of residence. The Ayr Tuareg are predominantly patrilineal but have remnants of matrilineal
[587] traits. I note in this connection that some Ayr Tuareg also claim that it is preferable to practise
the levirate and the sororate in the way that a widow can marry her deceased husband's younger
brother, a widower his deceased wife's younger sister. They hold that this is adopted from Islamic rules.

[601] In Ahaggar matrilineal rules still play a very great rôle as kinship terminology evinces for the term
for "mother's brother" is used exclusively for people of the mother's family and mainly for such
people of ascending generations who are matrilineally related to Ego – including very distant matrilineal
kinsmen. We have also seen that tribal membership is ultimately matrilineally determined, and
that matrilineal rules are valid for succession to territorial rights, for relations between noble Tuareg
and vassals, and ultimately for residence.

105 Tuareg social organization has been submitted to change. Islamic influence has produced a pre-
177 dominantly patrilineal system among the Southern Tuareg, including the *Kel Geres* and the *Kel Ayr*,
while among the Northern Tuareg matrilineal rules of succession and residence are still acknowledged.

105 It may perhaps seem rather odd that the Ayr Tuareg, like many Sudanese Tuareg, have been much
177 influenced by the patrilineal rules of Islam in their social organization, while the Ahaggar Tuareg
178 have been far less impressed by these rules in spite of having lived in intimate contact with Arabs
184 for generations, adopting many Arab cultural traits which are unknown among the Ayr Tuareg. What
is the reason for these distinctions in cultural change among the Tuareg of Ahaggar and Ayr? I believe
that the answer may lie in the differences in political systems. In pre-European times there was in
Ahaggar an intimate relationship between noble Tuareg and vassals within the drum-groups, several
small noble families being linked with their individual groups of vassals. This relationship (*temaẓlayt*)
was, as we have seen, predominantly an economic one, advantageous to both classes and not least
to the noble Tuareg, who were much dependent upon their goat-breeding and caravan-trading vassals.
There seem to be little doubt that, before the introduction of Islam, this relationship was organized
on the basis of matrilineal rules. And it may perhaps have been very difficult to adopt patrilineal
rules and to re-organize relations between noble Tuareg and vassals accordingly. When the first French

administrators settled in Ahaggar, the noble Tuareg under the leadership of the *Amenukal* are said 105
to have claimed that the French should respect their ancient matrilineal organization. It seems as 177
though such an intimate relationship between noble Tuareg and vassals was unknown in Ayr in pre- 178
European times. Subsistence in Ayr is easier than in Ahaggar, and the noble Tuareg there were not 184
so dependent upon their vassals for food as was the case in Ahaggar.

The fact that the Ahaggar Tuareg have conserved matrilineal rules in their social organization 178
though influenced by Islam and the patrilineal Arabs for centuries, may perhaps explain why they 582
have come to consider marriage with a mother's sister's daughter (or her daughter) as a better type of mating than cross-cousin marriage. Marriages with a classificatory sister (or sister's daughter) are, according to the Ahaggar Tuareg, not to be considered a recent phenomena, but have been practised for generations. The Ahaggar Tuareg claim that these marriages are most suitable because they do not give rise to changes of residence for the children. It is very probable that such marriages, which do not harmonize with traditional kinship rules, indicate the transition towards fully-fledged patrilineal rules among the Northern Tuareg.

We have no knowledge about Tuareg social organization in pre-Islamic times, but there can be 174
little doubt that matrilineal traits are very ancient, for they are mentioned by Ibn Batutah (cf. p. 457), 114
and most Tuareg have traditions of their descent from an ancestress. Bates thinks that the Libyans of antiquity possessed a type of social organization which was partly or fully matrilineal, though he admits that indications of the existence of the matriarchate are strong, but not conclusive (Bates 1914, p. 111 f.). Gsell, on the contrary, thinks that the ancient Libyans did not have a social organization of a matrilineal type. They were patrilineal like most Northern Berbers of to-day (Gsell 1920-28, V, p. 37 f.).

Baumann states that Tuareg matrilineal organization derives from the so-called Old Mediterranean Culture (Baumann 1940, p. 66). This is perhaps not the true explanation, for Frobenius is probably right in his statement that the Syrtic Culture was a high one which gained little influence among pastoralists, but became very important to sedentary people of North Africa and the Western Sudan (Atlas Africanus, H. 1, Bl. 11). On the other hand the theory advanced by Frobenius that the Tuareg matriarchate is an old Hamitic custom does not constitute a satisfactory explanation (cf. Frobenius 1933, p. 238 f.; Atlas Africanus, H. 1, Bl. 5).

The history of Tuareg matriarchate has been analysed very recently by Murdock, who states that its origin can be explained in three distinct ways:— (1) The Tuareg may have preserved the matrilineate from a very early period of Berber culture, perhaps also reflected among the extinct Guanche of the Canary Islands. This, however, is not considered very probable, because matrilineal traits do not exist among the many other North African Berber tribes, and also because the present relative isolation of the Tuareg is historically recent, dating from the Hilalian Arab invasion. (2) The indigenous *Bélla* were characterized by avunculocal residence and matrilineal descent, and they transmitted these rules to the conquering Tuareg. This second theoretical possibility is discarded by Murdock on the ground that the *Bélla* were presumably akin to the Hausa peoples on the southern border of the Tuareg country, and the Hausa are strictly patrilineal. (3) The ancestral Tuareg, while still resident in Tripolitania, were patrilineal, like all other mainland Berbers, and the matrilineate was developed as an

174 adjustment to special local conditions after their displacement into the Sahara. Murdock accepts this.
114 He believes that the Tuareg, when adopting the very un-Berber caste stratification of the Arabs, may well have instituted matrilineal affiliation for inter-caste marriages in order to preserve their purity of race. He seems to believe that patrilineal affiliation among the *Iwllemmeden* and the *Ifoṛas* is old, while matrilineal affiliation is recent (cf. Murdock 1959, p. 408 f.).

In the main Murdock's theory was advanced already by Gsell, who also stated that the Tuareg constituted the only known example of a people who had substituted their patrilineal type of affiliation with a matrilineal system (Gsell 1920–28, V, p. 38). The problems connected with father-right and mother-right in Tuareg society are complicated. It seems as if patrilineal succession among the Tuareg mainly, perhaps exclusively, is due to Arab influence. The existence of a pre-Islamic patrilineal system in the ancestral tribes of certain noble Tuareg can neither be discarded nor confirmed. However, there is absolutely no doubt that Tuareg matriarchate is very old and constitutes the traditional system in vassal tribes. I have shown above that matrilineal succession was once recognized in most Tuareg groups (cf. p. 456 ff.) and that certain vassals of the *Iwllemmeden* even to-day follow matrilineal rules of inheritance.

Briggs believes that pre-Islamic social organization was characterized by matrilineal inheritance and succession to authority, while residence was patrilocal so that the household consisted of a patriarchal extended family (Briggs 1958, p. 87). This is perhaps not very likely for the present custom of ultimate matrilocal residence is undoubtedly very ancient.

I find it adequate to conclude this chapter about diffusion and function in Tuareg social organization as follows:—

Tuareg patrilineal succession seems to be recent and post-Arabian; this holds also for present inheritance rules which follow Ḳoranic law. Thus there can be no doubt that social organization changes owing to the diffusion of certain social traits. Murdock's statement that social traits diffuse only under circumstances where the traits would have developed independently is contrary to the known facts.

Conclusion

The description of Tuareg culture presented in this study shows very clearly that cultural evolution 174
should be viewed mainly in the light of history. It seems possible to follow in broad outline cultural 177
development among the Tuareg through the last two thousand years. The main forces of cultural change and development were the following:—

(1) European occupation. The major change was the abolition of warfare and raiding, and consequently the breakdown of traditional political systems.

(2) Immigration of Arabs. It is possible that the ancestors of the Tuareg were influenced by the Arabs who came to North Africa during the first invasion of the 7th century A.D., but the second so-called Hilalian invasion of the 11th century was more important. It seems as if most Tuareg were converted to Islam in the 11th and 12th centuries A.D. The Northern Tuareg have taken over many new cultural traits from the Arabs who enjoy a high religious prestige. Apart from Islam, the Arabs brought into Tuareg country new breeds of domestic animals, new saddle types and the like, new dwelling types, new methods of food praparation, and new articles of dress. It is clear that the Arabs also influenced Tuareg social organization with the introduction of Ḳoranic inheritance, and their rule of patrilineal succession is adopted among most Southern Tuareg. The Arabs have also played a part in changing Tuareg political systems. New social classes were created with the introduction of Islam, and the words *khalifa* and *eṭṭebel* (*ettebel*) seem to indicate Arab influence in political structure. It is very possible that the instalment ceremony of chiefs, who are presented with a large headcloth, is an Arab custom. Furthermore, the rules of blood-wealth payment in the two groups of Northern Tuareg are of Arab-Islamic origin. – Arab cultural traits have been introduced over an extremely long period of years, and certain traits were apparently first adopted by the Tuareg when their country had been opened up after the European occupation.

(3) The invasion of pastoral camel-breeding Berbers which started at an unknown date in the first 174
centuries of the Christian era. These camel-breeders conquered another Berber-speaking population who lived mainly by goat-breeding. As a result of this conquest arose Tuareg class-division into noble Tuareg and vassals, which in most groups forms the basis of the political system. The first noble camel-breeders came from the east or the north-east, and they may perhaps have introduced certain traits of the so-called Young Sudanese Culture, while their techniques of camel-breeding were related to those of the so-called East Hamitic Culture. Noble Tuareg subsisting on camel-breeding have also immigrated to the Sahara in Islamic times owing to the pressure of Arab bedouins from the north. The noble tribes now dominating the two northern groups perhaps descend from *Hawwara* Berbers

174 who very early came under Islamic influence, and it is possible that these noble tribes introduced cultural traits typical of the Arabs.

(4) The Roman occupation of North Africa. The ancestors of certain Tuareg had some contact with the Romans who also penetrated into the northern parts of the present Tuareg country. But the Tuareg seem to have adopted very few culture elements from the Romans. The Tuareg were apparently never Christians.

(5) The Phoenicians. They introduced new cultural traits to North Africa but it seems difficult to sort out in present Tuareg culture those that were introduced by the Phoenicians.

Further back in time we cannot know much about cultural influences. We know that the horse was introduced during a period when the Northern Sahara was strongly influenced by high cultures of the Mediterranean, and we can safely assume that throughout a very long period of the pre-Christian era, when the Sahara had a more humid climate, cultures based on farming and stock-breeding played an important part in these regions. Rock-engravings representing hunting scenes prove that hunting was also once very important for the subsistence of people of these regions.

121 Our knowledge is yet very scarce of the cultures existing in the Sahara in prehistoric times. Nevertheless, I wish to take up in brief the question of the origin of nomadic stock-breeding in the light of Tuareg culture.

Anthropologists have held very different views about the first origin of domestic animals. The theory that stock-breeding originated within a true hunting culture gained many adherents after Hatt had advanced the theory that the reindeer was first domesticated for decoy hunting (cf. Hatt 1918 & 1919). Since then, many German and Austrian scholars have claimed not only that stock-breeding derived from hunting, but also that the first animal to be domesticated was the reindeer so that the stock-breeding based on horses and cattle in Central Asia came later and had reindeer-breeding as its foundation (cf. Schmidt & Koppers 1924; Schmidt 1951; Flor 1930). It seems as though such extreme viewpoints have now been discarded by most students and even Austrian and German scholars have in recent times dissociated themselves from the theories which were advanced mainly on Schmidt's initiative (cf. Jettmar 1953). There can be little doubt that reindeer-breeding is a fairly recent type of stock-breeding. This was explicitly stated already by Hatt, and though certain scholars even to-day claim that reindeer-breeding reaches back to Mesolithic, or even Paleolithic, times, their arguments cannot be accepted (cf. Nellemann 1961).

Though Hatt never claimed any great age for reindeer-breeding, he believed in an intimate connection between stock-breeding and hunting. In his latest study on the origin of primitive subsistence activities he stated that "It does not seem unlikely that the first domestication of ungulate animals was done by hunters who used their tame animals as decoys in the hunt, and later on developed the use of animals for transport and for dairy purposes, originally without any influence from agriculture" (Hatt 1953, p. 278). Among anthropologists who have recently supported the theory that stock-breeding and hunting are intimately connected activities of subsistence, we should also mention Coon who considers goats and sheep among the oldest domestic animals which were domesticated by hunters even before the cultivation of cereals (Coon 1952, p. 24). However, there are many scholars who do not accept the theory that cultures based on stock-breeding derive from hunting cultures.

Hahn, who was the first to write in detail on the historical origin of subsistence activities, stated 121
as his view that cultures based exclusively on stock-breeding were recent and were preceded by mixed farming cultures (Hahn 1896, p. 31 f.; 1905, p. 131; 1908, p. 19). Though some of Hahn's arguments in favour of this theoretical conception are difficult to accept, his general view that pure stock-breeding did not form a general stage in the evolution of culture is recognized by many scholars who hold that cultivation is everywhere older than stock-breeding. Forde long ago pointed out the great instability of pastoralism and its dependence upon grown cereals (Forde 1950 (1. ed. 1934), p. 403 f.), and in a very recent study, published in collaboration with Mary Douglas, it is stated that "Pastoral nomadism which is popularly believed to have preceded the development of agriculture actually appeared at a later stage in the Old World on the fringes of settled populations used to cultivation with the rearing of livestock" (Forde 1960, p. 330). Important contributions to the solution of the problem of the origin of stock-breeding have also been made by Childe, who says that in practically all the oldest food-producing settlements examined by archaeologists in Europe, Hither Asia, and North Africa, the basic industry is mixed farming (Childe 1936, p. 85). Childe does not explicitly claim that pastoral stock-breeding derived from a mixed farming culture, because pastoralists are not likely to leave many vestiges by which the archaeologists can recognize their presence (Childe 1936, p. 91). But Childe's general view seems to be in favour of origin of pastoral stock-breeding from a culture which knew farming, and he points out "that ancestors of our farmyard animals lived wild in most of the regions that seem likely to have comprised the cradle of grain-growing" (Childe 1936, p. 86).

In my description of Tuareg ecology I have indicated the great importance of agricultural products 433
for food among true pastoralists, both in Ahaggar and in Ayr. I believe that the latter Tuareg and the 262
Tuareg of the Sudanese savannah could perhaps subsists without cereals grown by agriculturists, 171
though it would not be so easy for them. The Ayr Tuareg around Agadez admit this and refer to their great difficulties in subsisting during one year of the second world war when millet was scarce. Most African pastoralists acquire provisions of cultivated grain for their food during periods when milk is scarce, and the general conception that African nomads live mainly on milk and meat is not valid. However, we cannot state that all pastoralists are dependent on agriculture for food, for a few people seem to subsist on stock-breeding products and on wild seeds. Thus Seligman describes from the Beja a tribe named Bedawib which differs from other Beja groups in that its members have no camels and do not eat agricultural food:— "The Bedawib do not cultivate at all and it is said that they would not touch grain even if it were given to them so that they live almost entirely on milk and meat". (Seligman 1913, p. 599 f.). Other pastoralists of the so-called East African Cattle Complex eat cereals grown by themselves or by neighbouring agriculturists, but agricultural food-products play a very little part to some of these people (cf. Lowie 1938, p. 314), and the Hottentots live by cattle-breeding supplemented by hunting and collecting (cf. Schapera 1930, p. 235). The argument that stock-breeding cultures cannot exists except in a kind of symbiosis with agriculture is not valid, but agricultural food-products make life easier for pastoralists who cannot subsist on milk all the year round. For we must bear in mind that in an arid or semi-arid country conditions of collecting are changeable, and it is also important to note that wild seeds are generally far less nourishing than are grown cereals. Even in the savannah country it is a great advantage for pastoralists to have access to grown cereals, and

433 pastoralists who live in the true desert country could hardly live without agricultural food-products.
262 In dry years the Ahaggar Tuareg subsist almost exclusively on wheat, millet, and dates. They cannot
171 in such years live on milk and meat, and collecting is of no importance, as the plants suitable for collecting do not germinate with the exception of a few species which are of very little value. In very arid countries agriculture seems to be necessary for the subsistence of pastoralists, and it is of great value also to pastoralists who live under more favourable conditions.

433 Partly owing to the decline of caravan trading, there are pastoralists who have recently taken up
178 agriculture in connection with irrigation. We have also mentioned that the Tuareg of Tasilé-n-Ajjer
171 engage in a kind of primitive agriculture in the river valleys after heavy rain, and we know from literature that this method was also practised in Ahaggar before the introduction of developed irrigation systems. We have seen that throughout the northern parts of the Sahara a connection between shifting cultivation and pastoralism is the rule rather than the exception. Primitive corn growing is, in fact, practised among many other pastoralists besides the Northern Tuareg, and the bedouins who sow wheat and barley by means of the plough or the hoe further north on the outskirts of the desert. In Southern Mauretania certain nomads grow millet and water melons in the river valleys which are annually flooded. Sowing is done mainly where the valleys broaden, small dams being constructed to detain water. This cultivation method is also applied by certain pastoral *Zenaga* (cf. Capot-Rey 1953a, p. 277), who are, perhaps, descendants of the ancient *Sanhaja* Tuareg who lived in this country before the Arab conquest. There are also pastoralists of the Beja people who engage in agriculture when living close to rivers. The Bisharin who camp around the Atbara River grow melons in the wet sand (Baker 1867, p. 38), the Hadendoa pastoralists, when camping close to the Gash River in the dry season, grow millet and other cereals (Seligman 1913, p. 599), and agriculture is also practised in the same region by pastoral Beni Amer (Munzinger 1864, p. 332).

A journey from the Mediterranean coast takes us from people who live mainly by agriculture (e.g., the Kabyle) to people who live by mixed farming as semi-nomads (e.g., the Chawiya), to people who are roaming pastoralists but practise shifting cultivation when possible and fairly regularly (e.g., the Ulad Nail, the Larba, and other Arab pastoralists on the outskirts of the desert), and, finally to the true desert nomads where agriculture is practised on a very small scale (e.g., the *Kel Ajjer*) or not at all (e.g., the *Kel Ahaggar* and the Chamba). It would thus be natural to explain the development of true pastoralism in Northern Africa as an adaption of a mixed farming culture to environment, and this view seems to have been adopted by several authors (Frobenius 1904, p. 154 f.; Steensby 1908–09, p. 285; Wölfel 1941, p. 89–140; Herzog 1956, p. 210–223).

174 The question of the origin of North African pastoralism can only be answered by a deeper knowledge of history, and the answer is not easy to find. Historical sources do not reach far back in North Africa. We know that throughout the Middle Ages the people who lived on the borderland of the Northern Sahara south of the Atlas and along the Mediterranean coast possessed an economic system much like that prevailing nowadays. Ibn Khaldun describes the economic life of the *Sanhaja* ~~Berbers~~, who lived in the country between Tunis and Cairuan, saying that they are cow and sheep breeders who also engage in agriculture (Ibn Khaldun III, p. 225). Of an Arab tribe called Azza of Cyrenaica, he says that though its members are plough cultivators they also lead their domestic animals into the

desert, which they might even cross to allow their animals to graze on Sudanese pastures (Ibn Khaldun I, p. 164 f.). Three Berber tribes or tribal groups, namely the Meseta, the Hawwara, and the Zenara, which, according to Ibn Khaldun, lead a pastoral life in Cyrenaica and further east, are stated to practise agriculture in the area between Alexandria and Old Cairo where they sojourn in winter (Ibn Khaldun I, p. 9). However, it would seem as if to most nomads of the northern desert agriculture was not so much practised that it could provide the necessary amount of cereals for the nomads. For, according to Ibn Khaldun, the Arab and Berber pastoralists of these northern regions generally spent the winter in the desert, while in summer they migrated to the Tell regions where they acquired their grain provisions (Ibn Khaldun I, p. 141, II, p. 275 ff., IV, p. 28 f.). 174

We have no information about agricultural activities among the Tuareg who, throughout the Middle Ages, lived in the very extensive area between the Atlantic Ocean and the Fezzan. Ibn Khaldun says that the Tuareg have camel-breeding as their most important occupation (Ibn Khaldun II, p. 105), and this is confirmed by Edrisi in the case of both Northern and Southern Tuareg. But though Edrisi states that the Tuareg live mainly on camel's milk and meat, certain passages of his book seem to indicate that agricultural products also played a part as food (Edrisi b, p. 10, 41, 67 f.). Ibn Batutah says that the Sultan of Tacadda (Ayr) knew neither wheat nor bread (Ibn Batutah IV, p. 443), which agrees with the fact that even to-day wheat-bread is not common among the people of Ayr, and he says of the Tuareg (the *Bardamah*) who live further south that they live on cow's milk and pounded millet mixed with water (Ibn Batutah IV, p. 437). This latter dish is doubtless identical with that known as *ərehara* (Ahaggar) or *ərejira* (Ayr) among modern Tuareg (cf. p. 245). Information about Tuareg nourishment is also given by Leo Africanus who, like Ibn Batutah, writes about this on the basis of personal experience. Leo says that the Tuareg live exclusively on camel's milk, butter, and meat, and eat no bread (Leo Africanus I, p. 152), but later he states that a Tuareg chief he visited in the desert had provisions of grown cereals and dates (Leo Africanus I, p. 154 f.).

Thus it seems as if agricultural food-products played a certain part for pastoral Tuareg of the Middle Ages. It is very possible that these products were obtained mainly through caravan trading, but the fact that agriculture is not mentioned in connection with the Tuareg of that early time cannot of course be taken as a proof that a primitive type of agriculture was then unknown. The Arab authors do not tell us much about Tuareg economy, and most Arabs who wrote about the Tuareg had no real knowledge of them. The fact that the *Kel Ajjer* practise a primitive type of agriculture in river valleys [241] has not generally been noticed by Europeans travelling in that part of Africa. This form of agriculture, characterized by a type of primitive sowing, is perhaps to be considered very ancient in North Africa. In any event it would seem as if agriculture and stock-breeding during antiquity were closely connected subsistence activities (cf. Bates 1914, p. 30 f., 91 f.). It is also most interesting that the archaeologically 172 known Fayum culture was based upon mixed farming as early as about 5000 B.C. (cf. Caton-Thompson & Gardner 1934), and the same holds for certain other prehistoric Egyptian cultures of about the same age (cf. Childe 1935, p. 49 ff.). One trait of the Fayum culture, namely the subterranean store-rooms for grain (cf. Caton-Thompson & Gardner 1934, p. 41 ff., pl. XXV ff.), is almost identical with the underground store-rooms used among the Tuareg. We can add that there is one other feature in Tuareg culture which perhaps point towards a connection between Tuareg culture and agriculture, 172 namely the cylindrical house with a conical roof, which seems to have constituted the original type of dwelling of many northern vassals. This dwelling type has a world-wide distribution among primitive agriculturists (cf. Birket-Smith 1948, p. 313), and we know that it was used in North Africa in antiquity. Hut-circles with heavy walls from predynastic cultures near Badari may perhaps be considered remains of such dwellings (cf. Brunton & Caton-Thompson 1928, p. 44 ff., 82 ff., pl. LXVI).

174 We might perhaps assume that culture as it existed among the ancestors of Tuareg vassals before the introduction of the camel was influenced by agricultural traits, and it would not be unnatural to advance the theory that it derives from a mixed farming culture. However, there can also be little doubt that we find in Tuareg culture features that are extremely old and probably date back to a hunting culture. It is of particular interest that the Tuareg have preserved very primitive methods of food preparation which are not generally known to true agriculturists (e.g., cooking with hot stones). I believe that the existence of such simple methods may be an indication that the culture is related to ancient hunting and collecting cultures. It is also very difficult to reject the possibility of a connection between hunting and the domestication of animals, for we have seen above that the Tuareg even to-day catch wild donkeys for domestication, and that, in the Middle Ages, they most possibly hunted these animals in order to utilize their meat and skin before the introduction of Islam which made
175 donkey's meat unlawful. It seems as if donkeys and asses have been important food animals throughout
171 the Near and Middle East even after the advent of Islam for we not only have Leo Africanus' state-
[261] ment that the nomads of the Sahara consume the meat of donkeys caught in snares (Leo Africanus II, p. 944), but Duveyrier's statement that the Tuareg of Tasilé-n-Ajjer catch donkeys in traps to utilize the skin (Duveyrier 1864, p. 231), and the fact that the Tuareg of Ahaggar even very recently have eaten donkey's meat in case of famine. There is information in literature which indicates that donkeys and asses have been commonly eaten elsewhere. Ibn Khaldun says that donkeys and horses were eaten by Algerian town-dwellers in case of need during the Middle Ages (Ibn Khaldun III, p. 377 f.), and Ibn Batutah states that Arabs of Oman consider donkey's meat lawful (Ibn Batutah II, p. 229). Ibn Batutah also says that meat of asses was eaten by the people of Suakin (Ibn Batutah II, p. 162), and we know that even up to modern times the Beja have hunted asses in order to consume their meat (Baker 1867, p. 55 f.; Murray 1935, p. 125). There is no information about the hunting of asses or donkeys for domestication among the Beja, but it is reported by several authors that members of this group leave their domesticated mares where wild asses are common in order that they shall mate with wild stallions (Heuglin 1869, p. 280; Bland-Sutton 1911, p. 188 f.; Murray 1935, p. 125).

174 We cannot discard the possibility that the domestication of donkeys originated from hunting, and it seems as though the donkey was first domesticated in Africa, where the wild ass still exists. When the domestication took place we do not know, but we are aware that domestic donkeys have been used in Egypt and in Asia (Ur) as early as 3000 B.C. (cf. Antonius 1922, p. 266; Hilzheimer 1930, p. 477). The donkey played a most important rôle in Ancient Egypt where it even had military importance (cf. Erman 1922, p. 592 f., 636, Figs. 207 & 208, pl. 36).

As to the domestication of other animals, we do not know how they were first tamed, and it has generally been overlooked that though there may perhaps be a connection between certain hunting

methods and domestication, the first domestic animals may of course well have been tamed in a culture 174
which already knew of farming. It seems to me that, generally speaking, the theory of a development [121]
of stock-breeding within a farming culture is the most plausible one.

At the time when the noble Tuareg introduced the camel the North African pastoralists were
apparently mainly goat-breeders who also had sheep of the *Ovis longipes* type, and donkeys. Tuareg 173
traditions state that the ancestors of the oldest vassal tribes in Ahaggar, the *Isebeten*, were not only
goat-breeders but also hunters, and a tradition collected by Foucauld states that they also knew agriculture (cf. p. 408). This may perhaps be so, though most Tuareg seem to deny it. A tradition of hunting
as an important means of subsistence to the ancestors of vassal Tuareg accords well with the fact
that important traits of a hunting culture appear to exist among the Tuareg; how can this be explained
when we also claim that stock-breeding apparently developed from a mixed farming culture? I
believe the most plausible explanation to be that the ancestors of Tuareg vassals first lived in the
northern Sahara as roaming hunters. At a later date they were strongly influenced by a mixed-farming
culture from which they adopted a primitive type of agriculture and stock-breeding. But stock-breeding
came to play the largest rôle for them, partly because it was better fitted to environment, and partly
because it was adapted to the roaming life of hunters.

It is most unfortunate that archaeology is so little advanced in the Central Sahara. Most archaeologists have been occupied with the study of rock-engravings. These are important to our knowledge of 172
cultural history, but they cannot be precisely dated. Apart from the study of engravings, investigations
have mainly concentrated upon tombs and other stone monuments, and these investigations do not
help us much to understand the development of subsistence activities in the Sahara. However, we
may ascribe some importance to the study of stone tombs of the so-called *chouchet* type. This, it is [173]
claimed by the ancient vassals of Ahaggar, constituted the traditional tomb of pre-Islamic Tuareg,
and the tomb in which their ancestress *Takama* is said to have been buried is of *chouchet* type. Such
tombs in Ahaggar seem to be found mainly close to river valleys that are flooded relatively frequently
and generally are also close to modern cultivation centres (cf. Lhote 1955a, p. 83). These tombs have
been used among the Tuareg even after their Islamization (cf. Monod 1932, p. 34; Reygasse 1950,
p. 39) but it is unknown when they were introduced into the Sahara. However, tombs of *chouchet* type 172
are not only found in large parts of Tuareg country (Ahaggar, Tasilé-n-Ajjer, In Azawa, Northern 171
Ayr, around Zinder, between Zinder and the Niger at Adṛaṛ of Tawa, Adṛaṛ of the Iforas), but also
in the adjacent regions of Mauretania, Tibesti, and Bornu, which is their southern limit of distribution
(cf. Reygasse 1950, p. 40; Lhote 1955a, p. 83; Mauny 1961, p. 76 f.). Types of *chouchet* tombs occur
in Algeria north of Hodna and in Aurès (cf. Reygasse 1950, p. 8) and perhaps also in the Canary
Islands (cf. Wölfel 1950, p. 248). Thus the possibility cannot be excluded that the former existence of
such tombs in Tuareg culture may be due to some connection with mixed farmers of the Mediterranean
at an early, but unfortunately yet unknown, date.

A last problem to be touched upon is the generally accepted view that nomadic stock-breeding is 121
intimately connected with a patrilineal social system. This view has been emphasized in particular
by the so-called Vienna School of ethnology under the leadership of Schmidt and Koppers, who speak
about "Der viehzüchterische Nomadismus als Schöpfer der patriarchalen Systems und des Erst-

172

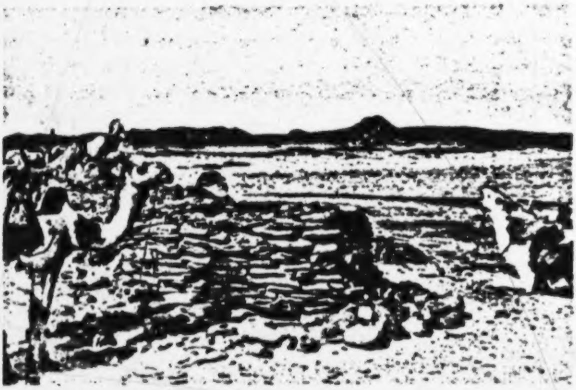

Fig. 298. Circular tomb of the so-called "chouchet" type. Ahaggar, Tamanrasset.

121 geborenenrechtes" (Schmidt & Koppers 1924, p. 537). I have stated above (p. 447) that there is not necessarily any connection between particular types of industry and particular types of social organization in North Africa. There are many examples of this in all continents where primitive peoples live. Whether there is historically any connection between patrilineal systems and pastoral stock-breeding 174 cannot be known. It is true that a great many pastoralists are pronounced patrilineal, but there is no doubt that certain pastoralists have adopted true patrilineal systems after their conversion to Islam. We have seen that this holds good for most Southern Tuareg, and it seems to be true also of the Beja pastoralists of Northeast Africa. They are to-day patrilineal, but formerly they were partly or entirely matrilineal, for Maqrizi states that among them a sister's son or a daughter's son possessed inheritance rights (Maqrizi, p. 561). We do not know whether other pastoralists have had matrilineal traits of social organization. Robertson Smith tried to prove that the Ancient Semites had previously been matrilineal (Robertson Smith 1907, p. 29 ff.), but his arguments have not been accepted by later authorities (cf. Pedersen 1958, p. 394). However, we cannot entirely discard the possibility that a kind of matrilineal social organization has formerly existed among pastoralists other than the Tuareg and the Beja, and this would apparently agree with the theory here accepted – that stock-breeding originated within a culture which knew farming, for matrilineal traits are frequently associated with primitive farming cultures. At all events I do not believe that matrilineal traits are to be considered recent among the Tuareg and the Beja, nor do I believe that these peoples were once patrilineal and that they adopted matrilineal affiliation owing to contact with other cultures, for we know that a true patrilineal system does not easily change into a matrilineal one (Murdock 1949, p. 190).

121 This theory is partly based upon the fact that transition from patrilineal to matrilineal systems cannot be shown to have occurred, partly upon the functional argument that matrilineal systems are not always stable because matrilineal rules frequently conflict with paternal love for sons. These conflicts of matrilineal systems have been described in great detail from Melanesia by Malinowski (Malinowski

1926, p. 100 ff.), and they have been studied later within the same area by other anthropologists (cf. [2]
Schlesier 1956, p. 54 ff.). It is my impression that they are comparatively rare among the Tuareg [571]
because their social systems have mechanisms which serve to prevent conflicts: The system of cross- [578]
cousin marriage in connection with rules of joking, avoidance, and those which permit a man to take domestic animals not only from his father but also from his mother's brothers would seem to lessen conflicts which are latent in other matrilineal systems.

Functional studies would seem to constitute an important means to explain the historical development of social organization, but the functional method alone cannot help us, for it is evident that diffusion also plays a considerable part in the change of social systems as has been shown in this study of the Tuareg. Anthropology is not science in the ordinary sense of the word. People do not behave according to such fixed rules as those we call "natural laws". They have rules but these are not always followed very strictly, and I have shown above that social rules can change owing to diffusion and the adoption of new social traits. So-called primitive peoples do not always live in the functional world of modern anthropology, but they always live in a world of change and tradition. It is possible that the Northern Tuareg for centuries have practised marriages with a maternal cousin, though this type of marriage disagrees with their social system which favours cross-cousin marriage. As to the *Iwllemmeden* Tuareg, we know that some of them adopted patrilineal succession owing to contact with the Arabs more than two hundred years ago. Nevertheless, these Tuareg have not adopted the entire social system of the Arabs, and even to-day there are matrilineal traits among them.

Tuareg culture cannot be understood by a mere functional analysis, for its creation is due to diffusion of traits from other cultures, and this seems to hold for all cultural aspects, including political systems and social organization. Consequently, I have tried to understand cultural development in the light of the methods of both functional and historical anthropology.

I hope that this study on Tuareg culture may be considered a contribution towards a more realistic historical method, and trust that my work may be of some value to others who take up the great problems connected with the history of North African culture. It may well be that some of the theories I have advanced or intimated will not survive when our knowledge of the Tuareg and North African cultures is increased, but I believe that a study of cultural development within limited areas will enable a far more realistic and detailed picture of cultural history to be created than has so far been the case.

Tuareg Time Reckoning

Tuareg time reckoning is mainly based upon the position of the celestial bodies in relation to the earth. Some Tuareg know the twelve months of the Julian Calendar, but most of them are only aware of a few of these names, some of which have acquired the meaning of definite agricultural activities (cf. Fig. 139). When the Tuareg divide the year into twelve months they normally use the system of the Islamic lunar calendar. The names of the twelve lunar months in the northern dialect are the following:— *aẓum* (Ar. *ramḍan*), *tésesé* (Ar. *feṭer*), *ǧir muhden* (Ar. *du elḳada*), *tafaské* (Ar. *du elḥajja*), *tamesseḍek* (Ar. *ạchura*), *tallit seṭṭefet* (Ar. *ṣefer*), *tallit ereṭet* (Ar. *rebiạ awl*), *awhim wa yezzaren* (Ar. *rebiạ tani*), *awhim wa ilkemen* (Ar. *jumad awl*), *sarat* (Ar. *jumad tani*), *ti n tneslemin* (Ar. *rejeb*), *émezzihel* (Ar. *chạban*) (cf. Foucauld 1951–52, III, p. 982 ff.). These names, known to all Tuareg, would appear to indicate that the lunar calendar among the Tuareg was introduced before Islam. The division of the week into seven days was apparently introduced with Islam for their names are clearly derived from Arabic. They seem to be known to all Tuareg, but play no important part in practical time reckoning. To indicate events that will take place within a few days the Tuareg will say to-morrow, the day after to-morrow, in three days, and so on. 805 [174] [177]

The lunar calendar plays a certain rôle to the Tuareg as it fixes all important religious feasts, and among the *Kel Ferwan* Tuareg it is normal for the members of a camp to count the succession of lunar years which are named after the place where the camp was situated during the religious feast of *tafaské*. Accordingly there is no definite system of year reckoning common to all Ayr Tuareg, who do not know the Islamic numbers of the years A. H. However, the *Kel Ferwan* Tuareg will sometimes talk about *awétay wa-n-Kawchen*, that is "the year when the Ayr Tuareg revolted against the French under the leadership of Kawchen" (1917) and *awétay wa-n-étran*, that is "the year when shooting stars were extraordinarily abundant" (perhaps about 25 years ago). [796]

To the Ahaggar Tuareg the word *awétay* is used in two different ways. It may be used for a lunar year, but it is most frequently used in the sense of "a period between two midwinters", so that the year among the Northern Tuareg is normally to be understood as "a solar year the exact beginning and end of which cannot be stated". Among the Ahaggar Tuareg each such year has its proper name given after the most important event within the year, e.g., the death or the election of an *Amenukal*, the occurrence of good pasture of a particular annual plant, the year of famine, etc. For years of pre-European times the occurrence of raids and warfare also serve as names of years. It may happen that two tribes do not use the same name for a year, but there is a remarkable tendency towards a uniform calendar system for all Ahaggar. The chronology of years is not known equally well by all

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805 Tuareg. Some people are able to reckon only five or ten years back in time, but there are also Tuareg who can count many years back so that they can determine the exact age of most members of their [114] household. The chronology of Ahaggar years has been studied by Foucauld, who gives the names from 1860 to 1906, and a remarkable study has been published by Dubief (cf. Foucauld 1951–52, III, p. 1538 ff.; Dubief 1942). In later studies on the chronology of the years among the Tuareg of Tasilé-n-Ajjer, Dubief has shown that there is no uniform calendar for the *Kel Ajjer*. The *Uraṛen*, the *Imanṛasaten*, and the *Ifoṛas* have their particular chronologies (cf. Dubief 1948, 1950, 1956). In addition to these chronologies for larger groups of Tuareg comprising several tribes, there are also special chronologies for individual tribes referring to events within these units.

To indicate future events the Tuareg may use the lunar calendar and refer to a particular day (night) of a particular month. They normally count in nights but to indicate the length of a journey they will frequently count in days. The sub-divisions of the day among the Tuareg of Ahaggar and Ayr are mentioned in the list below:—

(1) The early morning before sunrise, when one begins to see but does not see very clearly. It is a very short period known in Ahaggar as *ahokhak*, in Ayr as *dengelwaḳ*.

(2) The period from sunrise until 1½–2 hours later during which the sun is low and the heat not very trying. This is known in Ahaggar as *ağedelsit semmiḍet*, in Ayr as *aṛora*.

(3) The period when the sun is getting high in the heavens. People will now avoid the sun and rest in the shade. The name of this period, which corresponds to late morning or forenoon, is in Ahaggar *ağedelsit tekkuset*, in Ayr *agedelchit*.

(4) The period when the sun is very high. It comprises a certain period before and after midday, and is known as *tarut* (Ahaggar) and *terut* (Ayr).

(5) The early afternoon which begins around two o'clock. It is called *tazerrahat* in Ahaggar, *tézzar* in Ayr.

(6) The late afternoon from about four o'clock until sunset is known as *aẓellewaz* in Ahaggar and as *takkes* in Ayr.

(7) The period of dusk which is known as *almeẓ* and *almez*, respectively.

For the night the divisions are few and less clear, and it seems as if they are based mainly upon normal activities such as eating time, bed time, and the time of the early morning when it is considered preferable to set out upon a journey.

Fodder Plants of Ahaggar

The most valuable fodder plants in Ahaggar are mentioned in the lists below where my own material has been supplemented with information collected by Maire and published in his valuable study of vegetation of the Central Sahara (Maire 1933 & 1940). The abridgements *Tr.*, *L.M.*, and *U.M.* refer to Maire's botanical zones:— the *Tropical Zone*, the *Lower Mediterranean Zone*, and the *Upper Mediterranean Zone*, while the letters *a*, *b*, and *p* stand for "annual", "biennial", and "perennial" plants. 824 [22]

FODDER PLANTS OF CAMELS, SHEEP, AND GOATS

tahlé (*Typha elephantina*). Tr. p. Young shoots eaten by sheep and goats. Generally not eaten by camels. Maire gives similar information (Maire 1933, p. 52).

ébestew (*Imperata cylindrica*). Tr., L.M. p. Not much eaten by camels (Maire 1933, p. 54).

éẓereg (*Rottboellia hirsuta*). Tr. p. "Excellent pâturage en hiver, tant pour les chameaux que pour les ovins, caprins et autres herbivores (Voinot)" (Maire 1933, p. 54).

téberimt (*Andropogon laniger*). Tr., L.M. p. "Cette plante est mangée par les chameaux" (Maire 1933, p. 55).

afeẓu (*Panicum turgidum*). Tr., L.M. p. Very important fodder plant for all animals – particularly when green. The green grass is cut by the Tuareg who give it to their riding camels resting in the camp. – "La plante est un élément important de la nourriture des chameaux" (Maire 1933, p. 58).

talenfeẓut (*Pennisetum dichotomum*). Tr. a. & p. (cf. Gram 1935, p. 57). "Cette plante est mangée par tous les herbivores domestiques" (Maire 1933, p. 58).

uremmud (*Aristida plumosa*). Tr. a. & p. According to Gram perennial (Gram 1935, p. 54), according to Maire generally annual in the Central Sahara, while perennial in the Northern Sahara (Maire 1933, p. 61). An important fodder plant for all animals. – "Elle constitue un excellent fourrage pour les chameaux" (Maire 1933, p. 61).

tullult (*Aristida pungens*). Tr. p. Found in lower parts of the tropical zone, particularly on the northern outskirts of Ahaggar (including Ahnet) and in Tassilé-n-Ajjer. A very important fodder plant for all domestic animals. The Tuareg cut it green, or dry, to use it as fodder for their camels on caravan journeys through barren desert country (e.g., on journeys from Ahaggar to Tidikelt). – "Elle constitue, particulièrement au moment de la floraison, un excellent fourrage pour les chameaux et les autres herbivores domestiques" (Maire 1933, p. 62). [484]

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824 *tağamayt*, or *aharay* (*Danthonia Forskahlei*). Tr., L.M. a. & p. (cf. Gram 1935, p. 55). An excellent fodder plant for all animals. – "Excellente nourriture pour les chameaux et les autres herbivores domestiques" (Maire 1933, p. 65).

tağamayt, or *awkraẓ* (*Cynodon Dactylon*). Tr., L.M., U.M. p. Fodder value like *Danthonia Forskahlei* (cf. Maire 1933, p. 65).

taysest, or *tagsest* (*Eragrostis bipinnata*). Tr., L.M. b. or p. (cf. Gram 1935, p. 55). Fodder plant of little value. – According to Maire very little eaten by camels (Maire 1933, p. 67).

tahalema (*Schismus calycinus*). Tr., L.M. a. "Excellente nourriture pour les moutons, les chèvres et les chameaux" (Maire 1933, p. 69).

tanesmimt (*Rumex vesicarius*). Tr., L.M., U.M. a. Particularly common in Atakor. An extremely valuable fodder plant. – "La plante est mangée par les herbivores . . ." (Maire 1933, p. 78).

aresu (*Calligonum comosum*). Tr. p. "Cette arbuste constitue un excellent pâturage pour les chameaux, surtout lorsqu'il est en fleurs. Il est, par contre, peu apprécié des autres herbivores" (Maire 1933, p. 79).

tawit (*Chenopodium Vulvaria*). L.M., U.M. a Eaten by all animals.

aggawit (*Chenopodium murale*). Tr., L.M., U.M. a? Eaten by all animals.

aramas (*Atriplex Halimus*). Tr., L.M., U.M. p. Eaten by all animals. The plant is saliferous, but not very nourishing. Because of its salt content it is particularly valuable for camels. – "La plante est mangée par les chameaux et les autres herbivores" (Maire 1933, p. 81).

uhas (*Bassia muricata*). Tr., L.M. a. (p.) (cf. Gram 1935, p. 39). "Bon paturage pour les chameaux et autres herbivores" (Maire 1933, p. 81).

tiṛbar (*Suaeda vermiculata*). Lower desert country. a. "Cette plante est peu appréciée des chameaux, elle leur donne des coliques lorsqu'ils l'absorbent à jeun. Elle est également peu mangée par les moutons et les chèvres (Voinot)" (Maire 1933, p. 82).

tassak (*Nucularia Perrini*). Tr. p., evergreen. "Cette plante est appréciée des chameaux, beaucoup moins des autres herbivores" (Maire 1933, p. 82).

térahit (*Traganum nudatum*). Tr. p. "Plante très appréciée des chameaux, beaucoup moins des autres herbivores" (Maire 1933, p. 82).

issin (*Salsola foetida*). Tr. p., evergreen. This plant is important for its salt content, but is not considered very nourishing. It is eaten particularly by camels. – "Cette plante est mangée par les chameaux, mais fort peu par les autres herbivores domestiques" (Maire 1933, p. 84).

tasa, or *bender* (*Anabasis articulata*). Tr., L.M. p., bush. Eaten by camels, sheep, and goats. – "Cette plante est mangée par les chameaux; mais elle est peu appréciée des autres herbivores domestiques" (Maire 1933, p. 85).

tahara (*Cornulaca monocantha*). Tr. p. Very appreciated by camels. – "Cette plante est mangée par les chameaux, qui en sont très friands; elle est, par contre, à peu près complètement délaissée par les autres herbivores domestiques" (Maire 1933, p. 85).

témekerkiẓt (*Aerva tomentosa*). Tr., (L.M.) p., evergreen. "Cette plante est peu mangée par les chameaux; mais elle est appréciée des moutons et des chèvres. . . . (Voinot). – Cette plante est mangée par les zébus et les chèvres; les chameaux n'en veulent pas (Duprez)" (Maire 1933, p. 87).

agenesnes (*Glaucium corniculatum*). L.M., U.M. a. "Ainsi nommé parceque, quand les chameaux en mangent, ils restent ensuite qlq. heures dans l'incapacité de boire ni de manger" (Foucauld 1951–52, I, p. 464).

ahoyyar (*Cleome arabica*). Tr.; L.M. a. & p. (cf. Gram 1935, p. 36 f.). "Les chameaux refusent cette plante et les chèvres et moutons n'en mangent que très peu (Voinot)" (Maire 1933, p. 99).

tadant (*Boscia senegalensis*). Tr., very rare in Ahaggar, p., bush or tree. Eaten by camels.

aslaṛ (*Morettia canescens*). Tr., L.M. a. & p. (cf. Gram 1935, p. 48 f.). Excellent fodder plant for camels, sheep, and goats. – "Excellente nourriture pour les chameaux et les autres herbivores domestiques" (Maire 1933, p. 102).

ur temes (*Farsetia aegyptiaca*). Tr., L.M., U.M. a. & p. (cf. Gram 1935, p. 47). "Plante appréciée des chameaux et autres herbivores" (Maire 1933, p. 103).

echchengeḍiḍ (*Farsetia ramossisima*). Tr., L.M. a. & p. (cf. Gram 1935, p. 47). "Plante appréciée des chameaux et autres herbivores" (Maire 1933, p. 104).

aggasit (*Farsetia Hamiltonii*). Tr., L.M. a. & p. (cf. Gram 1935, p. 47). "Plante très appréciée des chameaux et des autres herbivores" (Maire 1933, p. 105).

elmaruğet (*Malcomia aegyptiaca*). Tr., L.M. a. (& p.?) (cf. Gram 1935, p. 48). According to Maire the ssp. *longisiliqua* is annual in the Central Sahara, perennial in the Northern Sahara. "Plante très appréciée des chameaux et des autres herbivores" (Maire 1933, p. 105 f.).

éṛir (*Sisymbrium Reboudianum*). Tr., L.M., U.M. "Elle est mangée par les chameaux, les moutons et les chèvres" (Maire 1933, p. 106).

azezzeğa (*Diplotaxis acris*). Very rare in Ahaggar. "Plante appréciée par les chameaux et autres herbivores" (Maire 1933, p. 107).

tanekfayt (*Eruca sativa*). Tr., L.M. a. Eaten by camels, sheep, and goats. – "Plante appréciée des chameaux et autres herbivores;" (Maire 1933, p. 108).

érak (*Savignya parviflora*). Not mentioned from Ahaggar, while found in the Northern Sahara. – "Plante appréciée des chameaux et des autres herbivores domestiques" (Maire 1933, p. 109).

tamaghé (*Moricandia arvensis*). L.M., U.M. a. According to Gram perennial under favourable conditions (Gram 1935, p. 49). Very common in Atakor. The Tuareg consider it one of their very best fodder plants, and it is eaten by camels, sheep, and goats. – "Cette plante est un excellent aliment pour les chameaux; elle est moins appréciée par les autres herbivores domestiques" (Maire 1933, p. 109).

alwat (*Schouwia purpurea*). Tr. a. An extremely important fodder plant to camels. It is also appreciated by sheep, but less so by goats. – "Plante très appréciée des chameaux, beaucoup moins des autres herbivores" (Maire 1933, p. 111).

afteẓẓen (*Zilla spinosa*). Tr., L.M., U.M. p. Foucauld states this plant to be annual (Foucauld 1951–52, I, p. 373), while according to Gram it seems to be perennial (Gram 1935, p. 50). I have myself seen it in flower even in extremely dry years, and the Tuareg claim it to be perennial. It is eaten by camels, sheep, and goats. – "Excellent aliment pour les chameaux et autres herbivores" (Maire 1933, p. 112).

aferhalaṛ (*Crambe Kralikii*). Tr., L.M., U.M. a. Eaten by camels, sheep, and goats. – "Excellent aliment pour les chameaux et les autres herbivores" (Maire 1933, p. 113).

ummum (*Caylusea canescens*). Tr., L.M. a. & p. (cf. Gram 1935, p. 68). "l'*oummoum* a une odeur désagréable qui se communique au lait des an. qui le mangent" (Foucauld 1951–52, III, p. 1204).

abseṛ (*Acacia Raddiana*). Tr., (L.M.) defoliating, summer-green. One of the basic fodder plants. The thorny shoots are eagerly eaten by camels, while goats highly appreciate very young shoots and leaves. Sheep do not feed properly upon acacias, but they eat the fallen fruit-pods which are very nourishing for domestic animals. Fruit-pods are collected as fodder for animals resting in the camps, and branches are frequently cut so that the kids easily can get at this valuable food. – "Les chameaux et autres herbivores mangent les feuilles de cet arbre, malgré la présence des épines stipulaires. Aussi trouve-t-on très souvent au pied des arbres de nombreuses branches coupées par les indigènes pour l'alimentation de leur bêtes. Les fruits constituent une nourriture particulièrement reconstituante pour les chameaux" (Maire 1933, p. 119).

tamat (*Acacia seyal*). Tr., defoliating, summer-green. A very valuable fodder plant like the acacia just mentioned and possessing the same value. – "Les feuilles et les fruits de l'*A. seyal* ont la même valeur nutritive, pour les animaux, que ceux de l'*A. Raddiana*" (Maire 1933, p. 120).

ahtes (*Acacia albida*). Tr., defoliating, summer-green. Rare compared with the two above-mentioned acacias, and therefore less important for fodder. – "Les feuilles et les fruits sont mangés par les herbivores" (Maire 1933, p. 120).

afarfar (*Crotalaria Saharae*). Tr. p., evergreen. "Les chameaux, les moutons, chèvres et ânes mangent cette plante mais pas en grande quantité. Elle passe pour lactogène (Voinot)" (Maire 1933, p. 121).

éheses (*Trigonella anguina*). Tr., L.M. a. "Bon aliment pour tous les herbivores" (Maire 1933, p. 123).

tachekerut (*Medicago laciniata*). Tr., L.M., U.M. a. Valuable for camels, sheep, and goats. – "Bon aliment pour tous les herbivores" (Maire 1933, p. 123).

tareda (*Psoralea plicata*). Tr. a. "Cette plante est très appréciée par tous les herbivores" (Maire 1933, p. 125).

tenefé, or *amarseros* (*Tephrosia leptostachya*). Tr. p. "Les chameaux et autres herbivores la mangent" (Maire 1933, p. 125).

aḍreylal (*Astragalus Vogelii & A. eremophilus*). Tr., L.M. a. One of the most important fodder plants for camels, goats, and sheep in Ahaggar – particularly to Tuareg living in the lower parts of the country. *A. Vogelii*: "Ces plantes sont appréciées par tous les herbivores" (Maire 1933, p. 126). *A. eremophilus*: "Bon aliment pour tous les herbivores" (Maire 1933, p. 131).

ékechchekir (*Astragalus pseudotrigonus*). Tr. Annual according to Foucauld (1951–52, II, p. 741), while perennial and evergreen according to Gram (1935, p. 64). – "Cette plante est très appréciée par les ânes, beaucoup moins par les chameaux, les moutons et les chèvres (Voinot)" (Maire 1933, p. 128).

ésker (*Astragalus corrugatus*). Tr., L.M. a. "Bon aliment pour tous les herbivores" (Maire 1933, p. 130).

laġul (*Alhagi maurorum*). Tasilé-n-Ajjer. "Bon aliment pour les herbivores. ... (Kilian)" (Maire 1933, p. 131).

aẓren (*Monsonia heliotropioides & M. nivea*). Tr., (L.M.) a. Excellent fodder plant for camels, sheep, and goats. One of the best fodder plants of Ahaggar. According to the Tuareg it is annual, but Gram states that he found a few perennial plants of the latter species *M. nivea* (Gram 1935, p. 53).

afessur (*Fagonia Bruguieri*). Tr., L.M. a. & p. (cf. Gram 1935, p. 73). "Cette plante est mangée, malgré ses épines, par les chameaux, les chèvres, les moutons, les gazelles et les bovins. ... (Voinot)" (Maire 1933, p. 139).

taġeruft (*Tribulus terrester*). Tr. a. An extremely valuable fodder plant to camels, sheep, and goats. – "Tous les Tribulus sont très appréciés des chameaux et autres herbivores" (Maire 1933, p. 143).

aboryal, or *tameṭṭereylalt* (*Tribulus alatus* & *T. macropterus*). Tr. a. (cf. Gram 1935, p. 75). Valuable fodder plants for camels, sheep, and goats.

tellakh (*Euphorbia granulata*). Tr., (L.M.) a. (& p.) (cf. Gram 1935, p. 52). "La plante est mangée par les gazelles, les chèvres et les moutons. ... (Voinot)" (Maire 1933, p. 146).

téhaḳ (*Salvadora persica*). Tr., evergreen tree or bush. Eaten by camels. – "Les rameaux feuillés sont mangés par les chameaux;" (Maire 1933, p. 150).

aẓawa (*Tamarix gallica*). Tr., L.M., evergreen tree or bush. The leaves are not very nourishing, but are saliferous for which reason the plant has some value as fodder.

tabarekkat (*Tamarix aphylla*). Tr., evergreen tree. The leaves contain salt and are eaten to some extent by domestic animals.

tahawet (*Helianthemum Lippii*). Tr., L.M. p., evergreen.

urruġ (*Helianthemum ellipticum*). Tr., L.M. Annual according to Foucauld (1951–52, III, p. 1588). – "Ces deux *Helianthemum* sont très appréciés des chameaux et autres herbivores" (Maire 1933, p. 160).

taṭṭayt (*Pituranthos scoparius*). Tr., L.M., U.M. p. In my notes I have this plant among the fodder plants of camels, sheep, and goats. According to Maire it is venomous:— "Ces plantes sont toxiques pour la plupart des herbivores; cependant les chameaux en mangent un peu quand ils n'ont pas autre chose à se mettre sous la dent" (Maire 1933, p. 163).

taẓenfela (*Limoniastrum Guyonianum*). Rare in the Central Sahara, and apparently unknown in Ahaggar (cf. Maire 1933, p. 166). – "Cette plante est peu appréciée des chameaux et autres herbivores, sauf au moment de sa floraison; les inflorescences sont alors broutées avidement" (Maire 1933, p. 166).

selluf (*Periploca laevigata*). Tr., L.M. "...; peu brouté par les herbivores" (Maire 1933, p. 170).

aṛellachchem (*Solenostemma oleifoleum*). Tr. p., bush. Of very little value for fodder. – "La plante est très peu broutée par les herbivores; toutefois les moutons en mangent un peu (Voinot)" (Maire 1933, p. 171).

tachkat (*Pergularia tomentosa*). Tr., L.M. p., evergreen. – "... peu brouté par les herbivores" (Maire 1933, p. 172).

tahenna (*Heliotropium undulatum*). Tr., L.M. Foucauld has it as annual (Foucauld 1951–52, II, p. 612), while according to Gram it is perennial and evergreen (Gram 1935, p. 34). – "Cette plante est un excellent aliment pour les chameaux et les autres herbivores" (Maire 1933, p. 177).

alkah (*Trichodesma africanum*). Tr., L.M. a. (& p.) (cf. Gram 1935, 35). – "Excellent aliment pour les chameaux et les autres herbivores" (Maire 1933, p. 178).

aġinest (*Moltkia callosa*). Tr. p., evergreen (cf. Gram 1935, p. 35). According to Maire frequently annual in the Central Sahara (Maire 1933, p. 179). "C'est un des aliments préférés des chameaux" (Maire 1933, p. 179).

taynast (*Echium humile*). Tr., L.M. a. One of the very best fodder plants of Ahaggar. Valuable to all animals.

éṛir, or *tenat* (*Lavandula coronopifolia*). Tr. p., evergreen (cf. Gram 1935, p. 59). – "Cette Lavande (arabe: *sejert-el-aroui*) est mangée par tous les herbivores, mais elle est particulièrement appréciée par les Mouflons (Voinot)" (Maire 1933, p. 182).

awit, also known by its collective name *awihat* (*Salvia Chudaei*). Tr., L.M. I have noted it as a fodder plant for camels, sheep, and goats. – "Cette plante est mangée par les chèvres et les moutons, mais non par les chameaux" (Maire 1933, p. 187).

takmezzut (*Teucrium polium*). Tr., L.M. Foucauld states it to be an annual plant (Foucauld 1951–52, p. 821), while it is perennial according to Gram's investigations in Mouydir (Immidir) (Gram 1935, p. 60). The Tuareg have informed me that the plant can be found in certain river valleys all the year round, and even in dry years. The plant is eaten by camels, sheep, and goats.

éfelehleh (*Hyoscyamus muticus* ssp. *falezlez*). Tr. a. & p. (cf. Gram 1935, p. 71). – "La plante n'est pas toxique pour les bestiaux, qu'elle fait engraisser;" (Maire 1933, p. 192).

ağerwa (*Antirrhinum ramosissimum*). Tr. – "... broutée par les herbivores, ..." (Maire 1933, p. 195).

anaddam (*Plantago ciliata*). Tr., L.M., U.M. a. Eaten by domestic animals. – "Plante très appréciée des herbivores" (Maire 1933, p. 199).

taneṭfirt (*Pulicaria crispa*). Tr., (L.M.) perennial according to Foucauld (1951–52, III, p. 1304). Important fodder plant of camels, sheep, and goats. – "La plante est mangée par les chameaux et les autres herbivores domestiques (Voinot)" (Maire 1933, p. 207).

taméyot (*Asteriscus graveolens*). Tr., L.M., U.M. p. (cf. Gram 1935, p. 42). Important fodder plant of camels, sheep, and goats. – "Plante très appréciée des chameaux et autres herbivores (Voinot)" (Maire 1933, p. 208).

téhatit (*Pentzia Monodiana*). L.M., U.M. p. Important fodder plant of camels, sheep, and goats.

téheréğğelé (*Artemisia judaica*). Tr., (L.M.) p., evergreen. Eaten by camels, and possibly also by sheep and goats. When camels eat too much of this plant they may contract a stomach disease, but the plant is also considered a remedy for intestinal worms.

zézzeré (*Artemisia herba-alba*). (Tr.), L.M. p., evergreen. Eaten by camels, sheep, and goats.

teféryast (*Echinops Bovei*). Tr., L.M. p. – "Cette plante est mangée par les chameaux, les ânes, les moutons et les chèvres (Voinot)" (Maire 1933, p. 215).

ahu (?). a. "...; il est un bon pâturage pour les chameaux et les chèvres, mais il donne au lait une odeur d'ail" (Foucauld 1951–52, II, p. 500).

ajako (?). a. "ressemble un peu à la luzerne, mais est plus petite qu'elle; est comestible pour les p. et les an.; se trouve dans l'Ah, mais seulement aux altitudes supérieures à 2.000 mètres" (Foucauld 1951–52, II, p. 712).

FODDER PLANTS VERY APPRECIATED BY DONKEYS

téberimt (*Andropogon laniger & Panicum Parlatorei*). Tr., L.M., p.

tésengelt (*Saccharum Ravennae*). Tr., L.M. p.

afeẓu (*Panicum turgidum*). Tr., (L.M.) p.

aṛemmud (*Artistida plumosa*). Tr. p. (cf. Gram 1935, p. 54).

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tağamayt (*Danthonia Forskalei*). Tr., L.M. a. & p. (cf. Gram 1935, p. 55).
tağamayt (*Cynodon Dactylon*). Tr., L.M., U.M. p.? (cf. Gram 1935, p. 55).
taysest (*Eragrostis bipinnata*). Tr., L.M. biennial (cf. Gram 1935, p. 55).
térakob (*Grewia populifolia*). Tr. p.
awkal (*Cynomorium coccineum*). Tr., L.M.
tañhart (*Mentha longifolia*). Tr., L.M. a.
ahahel (*Cistanche Phelypaea*). Tr., L.M.
teğellet (*Colocynthis vulgaris*). Tr., (a.), p. (cf. Gram 1935, p. 50).
alkeḍ (*Cucumis pustulatus*). Tr.
tanetfirt (*Publicaria crispa*). Tr., (L.M.) p. (cf. Foucauld 1951–52, III, p. 1304).
tağuķ (*Artemisia campestris*). Tr., L.M., U.M. p., evergreen?.

In my early notes on donkeys' fodder plants I have three names which I have not been able to identify – due to the fact that I did not then take Tuareg words down in *tifinaɣ*. The three names are *aharowa* (? = *aharay*; *Aristida* sp. & *Danthonia Forskalei*), *anador* (? = *annaddam*; *Plantago ciliata*), and *terforgit*, or rather *terfuḳḳit*.

Maire mentions that the plant known as *ekechchekir* (*Astragalus pseudotrigonus*), Tr. p., evergreen (cf. Gram 1935, p. 64), is very appreciated by donkeys, but less so by camels, sheep, and goats (Maire 1933, p. 128).

FODDER PLANTS EATEN PARTICULARLY BY ZEBUS

tahlé (*Typha elephantina*). Tr. p.
akeywoḍ (*Typha australis*). Tr., L.M. p.
tésenğelt (*Saccharum Ravennae*). Tr., L.M. p.
aɣemmud (*Aristida plumosa*). Tr. p.
taɣemmut (*Aristida* sp.). According to Maire (1933) this name has the same meaning as that just mentioned above, while I have been told by the Tuareg that *aɣemmud* is as high as barley, while *taɣemmut* is much lower.
ézenķ (*Cyperus laevigatus*). Tr. p.
ilegga (*Scirpus Holoschoenus*). Tr., L.M. p.
taleggit (*Juncus maritimus*). Tr., L.M. p.
aramas (*Atriplex Halimus*). Tr., L.M., U.M. p.
issin (*Salsola foetida*). Tr. p., evergreen.
taysest (*Eragrostis bipinnata*). Tr., L.M. biennial (cf. Gram 1935, p. 55).

The plants *aramas* and *issin* are important to zebus mainly for their salt content. It will be noted that the species here mentioned as fodder plants of zebu oxen are mainly perennial plants. Many of them demand humid soil, which is found close to most agricultural settlements where oxen are bred by agriculturists. Most of these peoples have only one to three oxen which generally graze tethered near the village. The oxen thus do not benefit much from the rich annual pastures in years of abundant rainfall, but, on the other hand, they are fed with garden-grown plants, as are donkeys of sedentary peoples.

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Glossary of Tuareg Words

Normalization advised by K.-G. Prasse

GENERAL VOCABULARY

ababah, pl. ibubah (Ah.), cross-cousin 449, 450
abakar (Ah.), ceramic drum 257, 259
abakhul (Ah.), pack-camel 99
abanğor (Ah.), dish of untanned skin 233
abatul (Ah.), roasting under the ashes 232, 233, 240, 325
abaun (Ah.), skin bag 93
abayoṛ, water bag 271-274
– (Ayr), the membrane of the placenta (of a she-camel) 97
– (Ayr), camel's neck vein close to the animal's head 122, 123
abba (Ah.), father 449, 450, 453
abegu (Iwl.), pouch to prevent the sucking of camel calves 311
abeğu (Ah.), pouch to prevent the sucking of camel calves 61, 62, 67
abekni (Ah.), hare (*Lepus harterii*) 160
abelboḍ (Ah.), skin bag 163, 228, 277, 280, 285
abellağ (Ah.), a tribute to the Amenukal from his vassals 400, 403, 404
abellengad (Ah.), *Reseda villosa* Coss. 177
aberhoh (Ah.), long-haired dog 114
abernuh (Ah.), burnus 304
aberoğ (Ayr), greyish camel 64, 96
abezbez (Ah.), dish of tender plants of wheat and barley 250
abezey (Ayr), *Cassia tora* L. 181, 243
abhaw (Ah.), reddish-brown camel 96
abiyawi (Ah.), he-goat having no horns 35
abora, sorghum 192, 195, 202
abora maser (Ayr), "Egyptian sorghum", *Zea mays* L. 202
aboraḳ (Ayr), *Balanites aegyptiaca* Del. 121
aboryal (Ah.), *Tribulus alatus* Del. & *T. macropterus* Boiss. 495
abroṛ (Ah.), cotton blanket 176
abseṛ (Ah.), *Acacia Raddiana* Savi 29, 129, 132, 159, 177, 230, 241, 248, 262, 273, 494
abubaz, pl. ibubazen (Ayr), cross-cousin 429, 451, 452
abuheğ (Ah.), type of skin-stockings 303
abuleğ (Ah.), he-goat not yet fully grown 34, 35
abunkelu (Ah.), weaned kid 34
aburi, wooden prong attached to a cow's foreleg 51
– wooden club 168, 170
– threshing stick 205
abûẓag, pl. ibuzagen (Iwl.), a type of skin-stockings 303
abzaw (Ayr), whitish camel 96
abẓaw (Ah.), whitish camel 96
achchebket (Ah.), transportation bag of date palm bast 79
acheku (Ayr), *Glossonema Boveanum* Decne 181
achellewen (Ayr, Kel Ewey), *Cistanche* sp. 181
achenkod (Ayr), *Gazella dorcas sp.* 164
acheṛor (Ayr), *Sorghum virgatum* Stapf 181
achwal (Ayr), locusts 167
adabaṛ (Ayr), cord around the mouth of kids, lambs, etc. to prevent suckling 51
adabun (Ah.), skin bag 279
– (Ah.), basket 266
adalil (Ayr), woman's head-cloth 14, 293, 462
adamam (Ah.), *Osyris alba* L. 174, 176, 178
adawal (Ah.), he-goat not yet fully grown 34, 35
adda (Ayr), father 451-453, 475
addeṛ (Ah.), a bunion of camels 121
adebara (Ah.), greyish donkey 106
adebel (Ah.), ceremonial sand-hill 471-473
adeggal, pl. idulan (Ayr), father-in-law 444, 453
adegnas (Ah.), camel of dirty white colour 96
adélen (Ayr), joking relationship 429, 454, 455
adeṛmağ (Ah.), he-goat having very small ears 35
adreylal (Ayr), *Astragalus Vogelii* (Webb.) Bornm 133, 216
adyaw (Ah.), large herd of camels 101
aḍeggal, pl. iḍulan (Ah.), father-in-law 453
aḍreylal (Ah.) *Astragalus sp.* 128, 129, 494
afagag (Ayr), *Acacia Raddiana* Savi 30, 31, 38, 63, 84, 86, 104, 127, 132, 180, 262, 273, 351
afarag (Ayr), enclosure for kids and calves, garden 36, 51, 202
afarağ (Ah.), enclosure for kids and calves, garden 36, 198

afaras (Ayr), tortoise 163
afarfar (Ah.), *Crotalaria Saharae* Coss. 494
afawa (Ah.), greyish donkey with white stomach 106
aferegak (Ah.), *Chrozophora Brocchiana* (Vis.) Schweinf. 121
aferhalaṛ (Ah.), *Crambe Kralikii* Coss. 493
afessur (Ah.), *Fagonia Bruguieri* D.C. 494
afezu (Ayr), *Panicum turgidum* Forsk. 30, 31, 127, 132, 180, 225, 234, 268, 269, 308, 333, 341-343, 349, 362, 364, 366, 367
afeẓu (Ah.), *Panicum turgidum* Forsk. 31, 128, 129, 140, 155, 159, 175, 179, 284, 362, 363, 365, 367, 371, 378, 380, 385, 460, 491, 496
aftek (Ayr), woman's shirt 293, 295, 462
afleẓẓen (Ah.), *Zilla spinosa* (L.) Prantl 493
afus, hand 140
agar (Ayr), *Maerua crassifolia* Forsk. 30, 132, 255
agayis (Ayr), a bustard, *Choriotis arabs stieberi* 164
agazagi (Ayr), edible seeds of a grass 181
agedagedu (Ayr), edible seeds of an annual plant 181
agedelchit (Ayr), the period of the day when the sun is getting high in the heavens 490
agegu (Iwl.), a cross-bar frame of a skin tent 384
agelgali (Ah.), pack-camel 99
agemmun, pl. **igemmunen** (Ah.), garden bed 190
agera, a leather bag 20
agerengefa (Ah.), mixture of fresh milk and buttermilk 221
ageruf (Ayr), *Tribulus terrester* L. 132, 180
aggasit (Ah.), *Farsetia Hamiltonii* Royle 176, 493
aggawit (Ah), *Chenopodium murale* L. 492
agg elet ma (Ah.), sister's son 450, 452, 454
aggezzeram (Ah.), a lizzard, *Uromastix acanthinurus* 162, 233
aggwr (Ah.), jackal, *Thos aureus sp.* 160
aginest (Ah.), *Moltkia callosa* (Vahl) 495
agusrer (Ayr), camel with greyish back and neck, the remainder of the animal being white 96, 98
agzir (Ayr), a hot wind 30
aġa (Ah.), a leather bucket 133, 134, 273
aġar (Ah.), *Maerua crassifolia* Forsk. 176, 255
aġedelsit semmiḍet (Ah.), the period from sunrise until 1½-2 hours later 490
aġedelsit tekkuset (Ah.), the period of the day when the sun is getting high in the heavens 490
aġeġu, pl. **iġeġan** (Ah.), a tent arch 356, 367, 368, 384
aġelhim (Ah.), a hoe 204
aġelmam (Ah.), a waterhole 3, 165
aġenesnes (Ah.), *Glaucium corniculatum* (L.) 493
aġera (Ah.), a skin bag 176
aġerwa (Ah.), *Antirrhinum ramosissimum* Coss. & Dur. 496
aġet, pl. **iġetten** (Ah.), central pole (poles) of a tent or fixed dwelling 371, 375, 380, 383
aġiwir (Ah.), churning bag 221, 222, 227
aġlim (Ah.), sheep-skin worn as a mantel 296, 298
aġror (Ah.), stone enclosure for kids 36, 38
aġula (Ah.), a little stick 74, 139, 160
aġum (Ah.), material of date palm leaves 192, 247, 266, 267, 269, 286
ahaggar (Ah.), camel of red colour 96
ahaġa (Ah.), tanning receptacle of camel hide 175, 270, 271, 460
ahabel, pl. **ihabelewen** (Ah.), *Cistanche Phelypaea* (L.) P. Cout. 174, 178, 179, 237, 497
ahammal (Ah.), a herd of male camels 101
aharaġen (Ah.), camp far from wells or water pools 149
aharay (Ah.), *Danthonia Forskahlei* (Vahl) Trin. and/or *Aristida sp.* 492, 497
aharet (Ah.), *Brassica Rapa* L. & *B. oleracea* L. 193
ahay, ahay (Ayr), signal to call donkeys 135
ahaya, pl. **iheyawen** (Ah.), grandchildren, descendants 452
ahayif (Ah.), saddle-girth 75, 84, 91, 110
ahayoy (Ah.), the dummy-calf 57
ahbeġ, pl. **ihebġan** (Ah.), arm-ring 256, 460
ahellum, pl. **ihellumen** (Ah.), rope of goat's hair 263, 264
ahenderremma (Ah.), camel which has the habit of neighing with joy 98
ahenkoḍ (Ah.), *Gazella dorcas sp.* 157
ahennaka (Ah.), the roof of a woman's saddle 89
aheṛ (Ah.), to raid, to plunder 409
aheṭṭera (Ah.), *Alyssum libycum* 176
aheyt (Ayr), signal to drive away donkeys 135
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[The use of milk as food has been marked for category 262; this is a major staple in the pastoral Tuareg diet.]

[For additional information about utensils, especially various kinds of containers, see category 116, pp. 221-33; 239; 242-43; 245-51; 253-54; 257; 260-61; 265-67; 269-86.]

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[For those aspects of land tenure relating specifically to the contractual agreement between landlord and tenant farmer, see category 675.]

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[For an extensive list of the names of Tuareg political and other social groups or categories, including relevant page references, see category 116, pp. 534-37.]

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[The author makes very frequent cultural comparisons between the Northern Tuareg, especially the Kel Ahagger, and the Southern Tuareg, especially the Kel Air. Only a relatively small number of the more striking differences have been marked for category 184; for further information on this topic the full text should be consulted in category 116.]

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[See category 342 for information about techniques of joining and structural devices used in dwellings.]

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[For additional information about animal transport, especially camel-riding and riding-gear, see category 116, pp. 67-113.]

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[For additional information about stock-breeding--mainly camels, sheep, and goats--see category 116, pp. 33-73; 117; 119-21; 125-36; 138-42; 146-47; 150-54. Information concerning animal husbandry relating to horses, donkeys, and zebu cattle has been marked for category 231 since these do not involve large-scale pastoral activities.]

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[For additional detailed information concerning Tuareg dwellings and dwelling types, see category 116, pp. 327-391.]